THE MAGAZINE OF BETTER SCHOOL ADMINISTRATION

THE Nation's Schools

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+ Who Really Speaks

for Education? + Curriculum

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THE Nation's Schools

THE MAGAZINE OF BETTER SCHOOL ADMINISTRATION

MAY 1961

Who Speaks for Education? 65 Lindley J. Stiles

Do Conant, Rickover or Bestor shape the educational policies of the future? No, says this school of education dean. American education is so diverse and autonomous that only local leaders, not national organizations, can shape its future course.

Where Students Maintain Much of Their Own Discipline 70 Stuart A. Anderson

It's the students who supervise study halls, library and corridor traffic at Niles Township High School in Skokie, Ill. For this job, they can be credited with better student morale, excellent leadership training, and financial savings.

How To Separate Folklore From Administration 76 Frederick "Chalk Dust"

Mr. Chalk Dust finds the unwritten, paradoxical laws of administration fall into three categories: folklore based on experiences of the past; laws that refute the folklore; specific laws that aren't included in preservice training.

Three A.A.S.A. Regionals Stress International Role of Education 78

Terminating the A.A.S.A. meetings is the third regional conference in Philadelphia. As in the two previous meetings, the schoolmen stress the international role of education and herald administrators as world statesmen.

Midwest Administrators' Meeting Rejects Isolation 82

Turning international in their views, schoolmen attending the St. Louis meeting of the American Association of School Administrators stress the need to make American children and adults worldly-minded because mid-American isolation is dead!

A.S.C.D. Looks 'Within' for Answers 91

New vigor marks conference of curriculum consultants. Members change from a "watchdog" to action group, and speak out.

Shortage of Classrooms and Teachers Will Continue 94 Craig E. Peterson

The U.S. Chamber of Commerce is taken to task for using outdated and inadequate information in predicting surpluses of classrooms and teachers.

Acoustics in the School: Administration Study No. 9 95

Part 1: How To Design and Equip Schools for Good Hearing 96 Lloyd J. Williams

Part 1 of this study describes the necessary acoustical conditions that must be considered in new school design — adequate loudness, low background noise level, the avoidance of echoes, and the control of reverberation time.

Part 2: Acoustics in Building Materials and Equipment 116

Part 2 of Administration Study No. 9 tells how to select and use the most suitable materials and structural systems for schools.

How One District Obtained Broader, Cheaper Fire Insurance 130

Through competitive bid placement and independent appraisal, school fire insurance is cheaper and more extensive for a school district in Effingham, Ill.

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A.H.E. Calls for Halt on Misuse and Overuse of Tests 136

Schoolmen at the 16th National Conference on Higher Education strongly protest the misuse and overuse of tests and the negative effects on children, parents, teachers.

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THE Nation's Schools

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Let Local Board, Staff Determine Curriculum

The majority of administrators responding to this month's poll would let the local school board and professional staff (as opposed to state, regional and national interests) determine curriculum content.

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Food Served in Classrooms 129 M. E. Nelson

In a New York school, first graders are happier when eating in small groups, away from the large cafeteria. The children are more relaxed and have fewer accidents and upset stomachs.

SCHOOL LAW

Compromise City-School District Squabbles 134 L. O. Garber

A Connecticut court rules that a common city council cannot take land devoted to school purposes. When the squabbles of two governmental agencies can't be settled by compromise, says the court, the remedy is to be determined by the electors.

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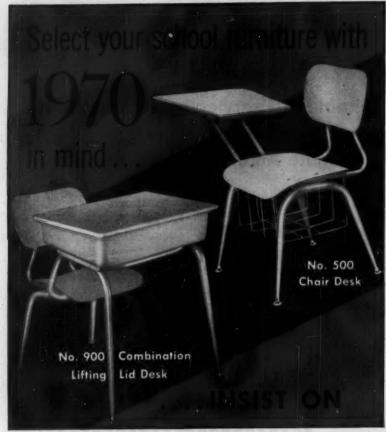
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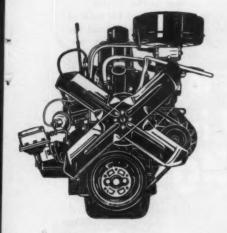
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By CALVIN GRIEDER Professor of School Administration University of Colorado

The Place and Value of Teaching Machines

T BEGINS to look as though the next binge the American public is about to go on in education will be teaching machines. And this before we have recovered from the blows dealt on behalf of foreign languages in the elementary school, ability grouping, merit pay schedules, and so forth.

These, among others, can't properly be lumped together. I believe that ability grouping and merit rating will continue to attract much interest and eventually be widely adopted. Teaching foreign languages in the elementary schools already is being seriously questioned, and after some vacillation I have concluded that it was a flash in the pan and will not be a permanent feature of the curriculum.

A word used by the Spanish critic and philosopher, Jose Ortega y Gasset, in the title of an essay published in this country in 1948 describes pretty well my own feeling about teaching machines. Ortega wrote on "The Dehumanization of Art," in an effort to explain abstract or "modern" art (fine art, poetry, music and so forth). The "dehumanization of teaching" inevitably will be the result of our adopting more and more mechanical devices for the instruction of the young.

Teaching machines will give administrators and teachers a lot of worry and uneasiness before sanity again prevails more or less, and the machines' legitimate function in the teaching-learning situation is defined. Before that, boards of education are sure to be pressured by their communities, egged on in turn by a barrage from commercial as well as academic interests, and the boards will put the pressure on superintendents

and principals directly and indirectly.

There also will be pressure from the other side — against teaching machines and other mechanical devices. Already some leading intellectuals are expressing, in effect, grave doubts about the direction in which we seem to be moving in the schools, about push-button pedagogy, test tube teaching, and the like, although specific devices may not be referred to.

The noted author, Lillian Smith, recently wrote: "War is the human race's No. 2 enemy. Its No. 1 enemy is the creeping, persisting, ever widening dehumanization of man."

Harold Taylor, who retired a year ago from the presidency of Sarah Lawrence College, writes: "My plea is for the restoration of the personal element in life and in education at a time when everything is pushing us into collective states of mind, when intellectuals huddle together in committees that issue reports in anonymous prose, when so many people are willing to strip themselves of their personal qualities in order to become clusters of approved characteristics."

Five N.E.A. organizations in their recent pamphlet, "Labels and Finger-prints," have expressed a fear that schools are "beating a retreat to formalized mass instruction with conformity, not diversity, as the goal." Apropos here is the observation that the tiresomely touted program of airborne television will be the most extreme example of "formalized mass instruction" that has ever been placed in operation.

John Hersey's latest book, "The Child Buyer" (reviewed rather charitably, I thought, by Jim Spinning in The NATION'S SCHOOLS for January), is in part a furious denunciation of depersonalization in the schools.

It is going to be hard for most of us to make up our minds about the place and value of teaching machines. I don't think that they will ever be able to take the place of enlightened and capable teachers. Experience with films, radio, TV and other media thus far does not lead one to believe that the need for good teachers will be diminished.

On the other hand, I do believe that for some kinds of learning tasks, machines will be regarded as just what the doctor ordered.

Let us temper our American predilection for going off the deep end, and in a deliberate and fairly rational way try to ascertain where and how and for whom the new teaching devices can be of most value. I would hate to give up well qualified teachers and their influence. But if good teachers can extend their powers by the use of mechanical aids, let us not be obtuse about them.

Windowless School Has Some Advantages

What at first blush must appear to most people as far more repugnant than teaching machines is the windowless schoolhouse. The very idea of a school without windows is just simply repulsive — ugh!

In at least one city this winter, plans for a windowless school were felt to be such a radical departure from traditional school plant concepts that the board of education was inclined to let the people vote on the matter. Whether this was actually done in Gary, Ind., and if so how it turned out, I do not know. I would guess that in almost all communities the people would turn thumbs down on a windowless school if they had a chance to vote on it, unless an extraordinary job of interpreting its advantages was done.

I confess that six months ago I wouldn't have been receptive to much discussion of the subject. Even after reading and hearing about several of these abominations, my interest was definitely cooler than luke-

Some weeks ago I had an opportunity to witness an excellent presentation by slides, tape recording, and discussion of the windowless High-

(Continued on Page 14)

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JOHNSON'S YWAX . . . THE PEOPLE WHO TAKE A LONG HARD LOOK es. C. JOHNSON & SON, INC., RACINE, WISCONSIN

Administrator's Clinic

(Continued From Page 10)

land Junior High School at Hobbs, N.M., built for 1000 students and presently housing 800. Last fall, after the building had been in use more than a year, not a single negative response was reported in a poll of parents, teachers and students.

Other windowless schools have had a similar favorable reaction. The widely publicized Hillside High School at San Mateo is partly windowless, and is reported as a highly satisfactory plant. The special feature of this structure is its flexibility, to which its partial freedom from windows contributes.

When one gets his feelings under control and studies the windowless schoolhouse dispassionately, its advantages loom larger and larger. Briefly, some of the major points in its favor are:

1. Complete control of lighting. The intensity and quality of light can be whatever is specified. Lighting is one of the most serious problems in schoolhouse planning.

2. Instantaneous adaptability of every room for film projection - just turn off the lights.

3. Economy in wall construction and in lower maintenance costs, and savings from the elimination of shades, blinds, louvers, eyebrows and what-not for control of sunlight.

4. Greater possibility of flexibility in room sizes and uses, since window placement is of no concern, and air conditioning affords complete freedom from any degree of dependence anywhere on window ventilation.

5. The availability of all wall space for instructional use.

A windowless school has to be seen to be appreciated. Fears that students and teachers would develop symptoms of claustrophobia or feel uncomfortably closed in have not been justified.

When one thinks a little about this matter, he can find a number of other windowless examples in his everyday life: department stores, supermarkets, automotive shops, office buildings, theaters, restaurants, night clubs, bars and so forth.

A friend of mine who is superintendent in a suburb of Denver was discussing this subject with me a few days ago. The high school library in his district has a series of large picture windows commanding a magnificent view of the Continental Divide. But the draperies are almost invariably drawn to keep out the sun; they also shut out the magnificent view.

Accuracy is essential in a lathe. No one denies this. Yet accuracy alone isn't enough. It must be sustained

accuracy. This requires holding exact tolerances during all machining operations and throughout the lathe's productive life. The new Logan 14" swing lathes deliver this sustained accuracy. For example, these lathes have variable speed drive for precise turning speeds. The drive can be adjusted at anytime to any rpm (40-1400) while the lathe is running. You don't stop to shift belts! Also, the ball bearing spindle's 13/4" bore and 11/16" collet capacity will perform many jobs. But, perhaps, your

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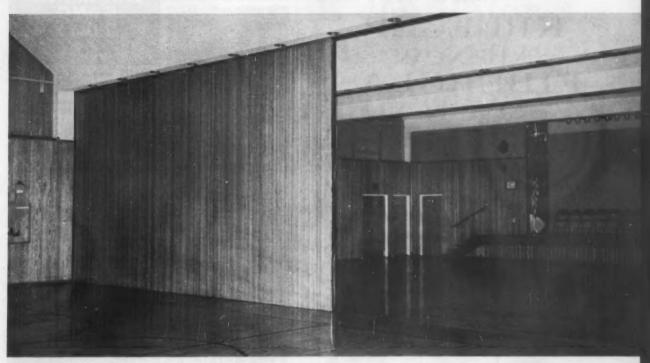
Educational Building Rises 13 Per Cent

CHICAGO. - Contracts for educational buildings rose in 1960, setting a new all-time high, reported the February issue of Building Business, monthy bulletin of F. W. Dodge Corporation. Contracts for this type of construction last year totaled \$3,005,000,000, up 13 per cent over the 1959 level.

The 1960 pace marked the first time that educational contracts exceeded the \$3 billion mark; in the two previous years, this category had declined somewhat.

"We expect that educational building in 1961 will at least match the record volume of last year, reflecting the continuing pressure for additional classroom space and other educational facilities," said George Cline Smith, vice president and chief economist, and Edwin W. Magee Jr., economist, F. W. Dodge Corporation.

BEFORE SCHOOL OPENS THIS FALL



Combined auditorium-gymnasium at Hanscom Air Force Base, Bedford, Mass.

Architects: Architects Collaborative

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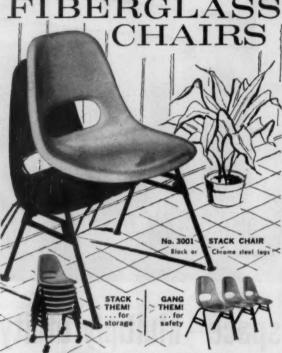
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No. 3201 ARM CHAIR Black or Chrome steel legs



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Curved and shaped to body contours, Krueger's Fiberglass chairs help raise the standards of seating comfort — add colorful warmth and beauty to any room setting. You can tell a Krueger chair by its rich, smooth finish — free from seat "bumps", because the leg attachments are molded-in as an integral part of the one-piece fiberglass body. These chairs offer seating flexibility, too, because you can stack or gang them (Model 3001) . . . and mix or match their softly hued decorator colors of Sand Beige, Shell Coral, Evening Gray, Turquoise and Parchment.

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How this unit ventilator helped launch a new trend in school construction

Just four years ago Herman Nelson introduced the first unit ventilator for classroom air conditioning. It was this unit ventilator that first offered school planners a choice of future or immediate air conditioning at a reasonable cost.

Herman Nelson's unique "now or later" concept stirred interest in school air conditioning. Architects proved that air conditioned schools could often be built for less than conventional buildings. Construction savings alone absorbed the extra cost of air conditioning.

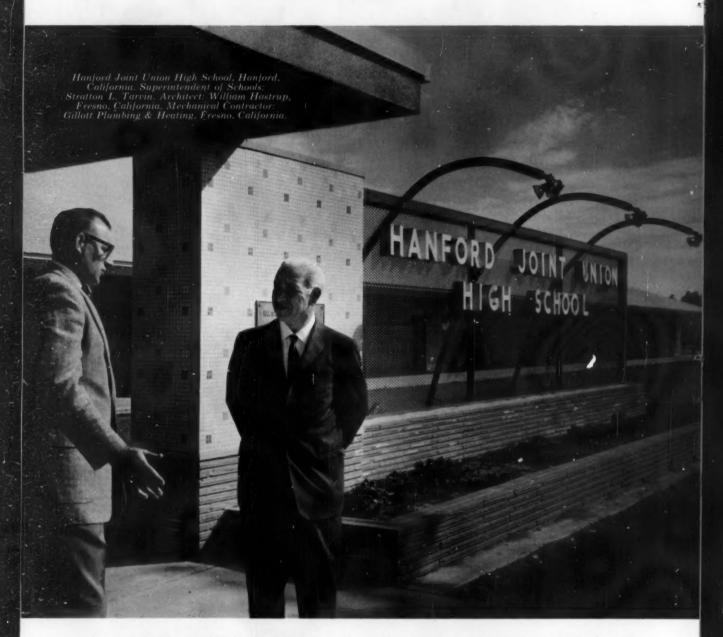
Classroom air conditioning has come of age. Hundreds of air conditioned schools have been built...hundreds more are on the drawing boards. Turn the page for a close look at a typical Herman Nelson "new trend" school.

Herman Nelson photo-reporter visits another air conditioned school



SECOND IN A SERIES:

"We hope to air condition



Stratton L. Tarvin (left), Superintendent of Schools, and Dr. R. deCampos, Chairman of the Hanford Board of Trustees, reflect community enthusiasm for air conditioned schools. They feel that air conditioning should be included in the plans for all future new schools in Hanford.

Mr. Tarvin says, "Air conditioning was considered in the early stages of planning. In our

climate, non-air conditioned rooms are unbearable about four months during every school year. Our year-round unit ventilator system eliminates these conditions.

"Our first experience with school air conditioning has been very successful . . . students are more alert and attentive, and teachers are less exhausted at the end of a day."

all future schools"

Stratton L. Tarvin Superintendent of Schools Hanford, California

Architects utilize HerNel-Cool systems to reduce school construction costs

What is a community's reaction to its first air conditioned school? In Hanford, California, as in hundreds of other communities, school air conditioning has proved to be both practical and economical. In fact, school officials want air conditioning for all future schools.

Year-round HerNel-Cool Unit Ventilator systems allow the architect to design a more compact school. Low cost back-to-back classroom design makes it possible to eliminate design restrictions imposed by conventional schools. (Example: orientation for natural ventilation.) Expensive fenestration can also be eliminated.

Herman Nelson HerNel-Cool Unit Ventilators are flexible. They provide heating, ventilation and outdoor-air cooling during winter months, and keep room temperatures cool and refreshing in the summer. Air is filtered in each classroom unit . . . there are no dust-collecting ducts between the unit and the classroom. Write for more information: School Air Systems Division, American Air Filter Company, Inc., 215 Central Avenue, Louisville 8, Kentucky.



Effects of the Herman Nelson system are extremely important in the school's modern chemistry laboratory. Here a high degree of student activity, chemical odors, and other factors require the flexibility of a unit ventilator system to maintain comfortable, odor-free conditions.

Herman Nelson







"Reaction of parents and community to our first air conditioned school has been highly favorable. It is a good example of the community's progressive education program. We're all very pleased with it," states the Hanford Joint Union High School P.T.A. President.

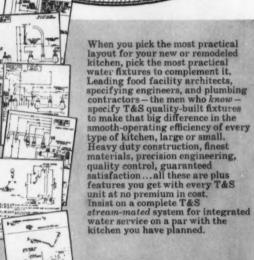
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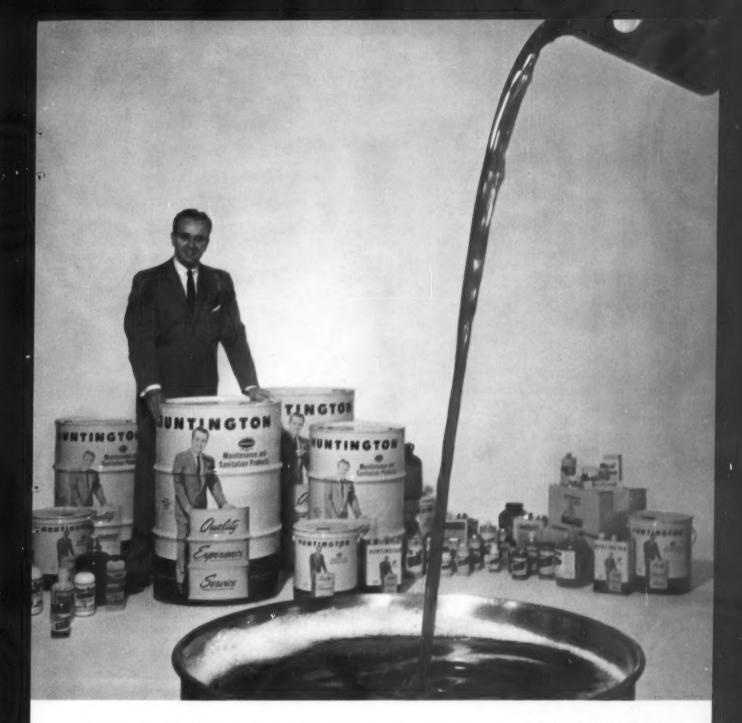
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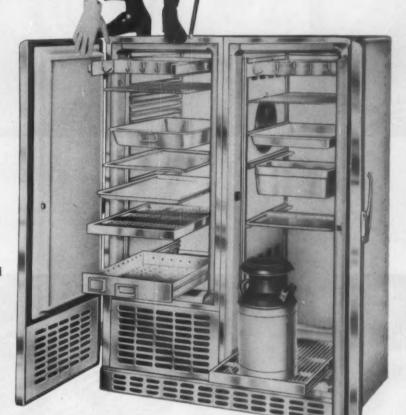
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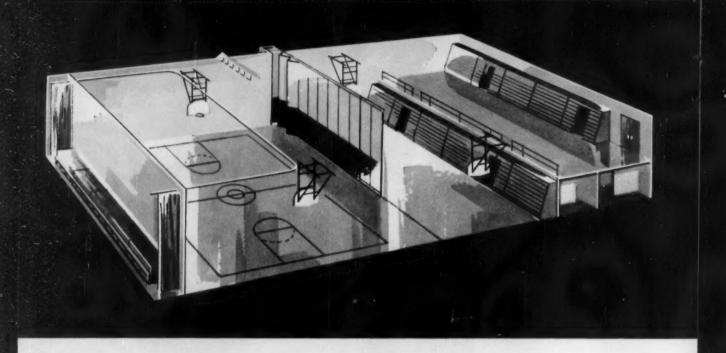
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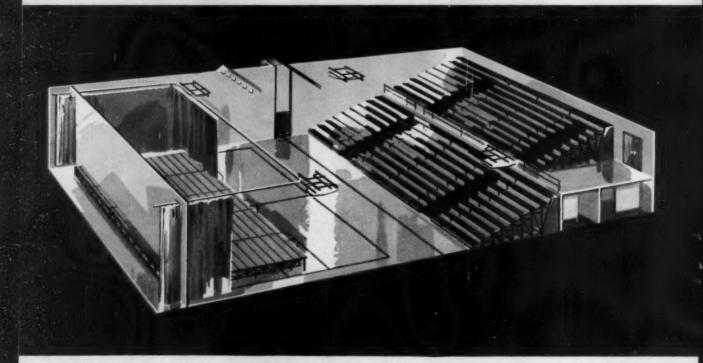


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Brunswick 8

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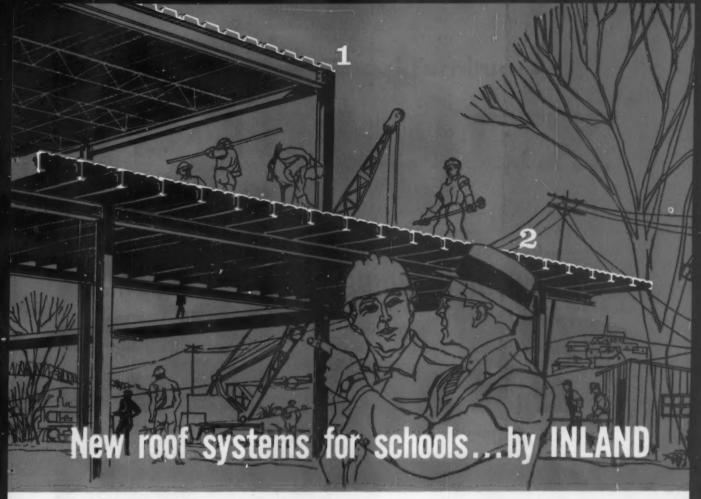


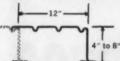
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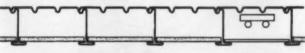
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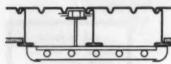
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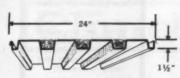
Light Diffuser



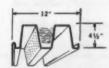
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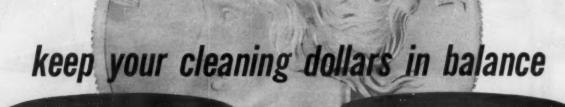
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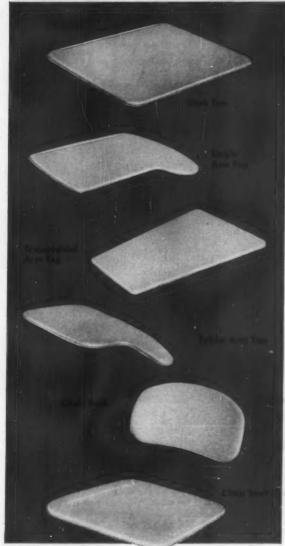


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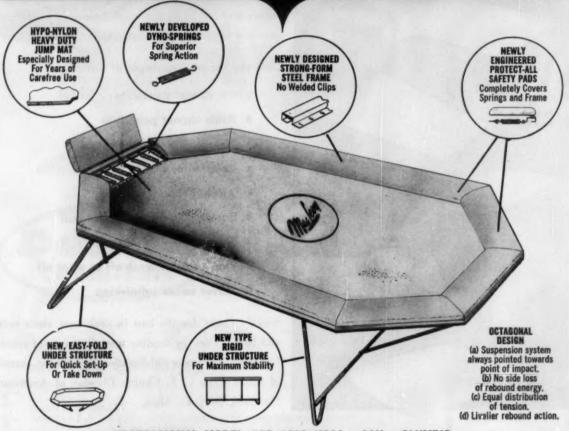


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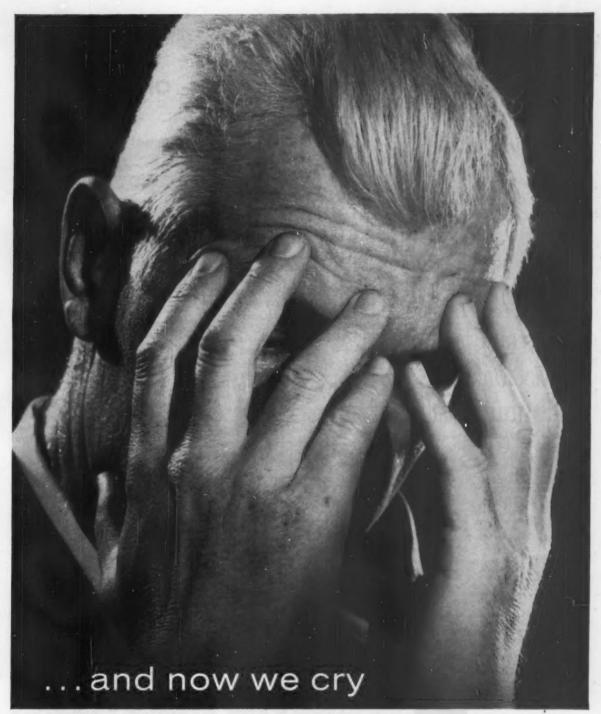
Massive laminated beams provide wide span support for a pitched gym roof in this Fort Wayne school. The Tectum roof deck absorbs sound of recreation areas at the same time providing excellent insulation and light reflectivity.



This elementary school is typical of the hundreds that have incorporated sound absorbing Tectum. For economy, good looks and fast erection, the Tectum method has much to offer.



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Extra heavy Tex-Steele doublethread cotton duck gives added strength and body. No starches or fillers are used. Can be quickly washed, brushed or dry cleaned.



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The Nature of a School Board

BOARDSMANSHIP: A Guide for the School Board Member. Edited by H. Thomas James. Stanford: Stanford University Press. 1960. Pp. 102. \$3.

THE EFFECTIVE BOARD. By Cyril O. Houle. New York: Association Press. 1960. Pp. 174. \$3.50.

The superintendent of schools has a natural and generally legitimate interest in the way boards and board members operate. He does not need to be told how often he and his staff are the ones most directly affected by school board action, or how often the drafting and revision of the rules land in his lap. I can hear it now, the favorite remark of one board president: "That's about what we want to say. Now let the superintendent put in the verbage (sic). I guess that's what we pay him for."

But most superintendents themselves are board members, too. They sit on the governing bodies of community councils and agencies, service clubs, Y.M.C.A.'s, interfaith groups, colleges, scholarship funds, and professional associations.

Both these books, then, are close to our alley. The first, prepared under the direction of the California School Boards Association as a 1961 revision of its 1955 volume, speaks to the first interest of the school administrator. The second, which is published under the aegis of the National Board of Y.M.C.A.'s as part of its Leadership Library, covers boards of varied purposes and activities, distilling from them the common essence of all good boardsmanship.

While the California volume makes good sense anywhere, readers from the other 49 states must, of course, keep their own state regulations in mind. This column invites your attention to the brief and cogent sections on board committees (to have or not to have?), keeping meetings short by keeping them on the track, channels for complaint and criticism, curriculum improvement, and schoolhouse planning.

Perhaps the most fruitful chapter is that on board-staff relations and support for the superintendent. Boards are warned that a school system cannot change its chief executive without suffering at least some temporary loss of efficiency. In California a superintendent must be notified six months prior to the expiration of his contract if the

board does not choose to renew it. Otherwise, renewal is automatic.

This is a well edited and useful manual. It should be emulated by other

According to Houle. "The Effective Board" grew out of the adult conferences which Prof. Houle conducted for 10 years for the University of Chicago and the Welfare Council of Metropolitan Chicago. Even in print there is a fine viva voce ring to his words. He begins with how boards began - with the shift from pure democratic action where "everybody decides everything" to the more efficient principle of delegation. "Boards provide for continuity of policy and program. Executives come and go, but the board goes on forever. , It is the chairman's task to administer the board, and it is the executive's task to administer the program."

Even while accepting that statement, one still can reflect that individual school board members tend to come and go even more frequently than the individual superintendent, and how, out of his more intimate knowledge of the program as well as his training and experience, the school administrator may develop a massive and uncomfortable yen to have a strong say, if not a vote, in what the program should be.

The author, well aware of this point, makes proper allowance for the executive to be heard on policy making. But he is insistent that every board should keep its eye on over-all objectives and satisfy itself that the goals of particular parts of the enterprise are in harmony with those objectives. He also avers that it is the executive who is the chief architect of the relation between himself and the board.

A Board's-Eye View. This little volume could be good medicine for the school superintendent. It should help him to catch a board's-eye view of himself as an executive and so perhaps free him from many a blunder. It also should persuade him to do as he would be done to in his own service on other boards.

Reading this treatise with binary vision is a fascinating experience. One continually observes, for example, the ways in which his own school board members are chosen as compared with

(Continued on Page 36)



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This is the glide that has been scientifically designed to kill noise.

Furniture equipped with DOT Super-Silent Glides floats on rubber, slides silently and smoothly on steel because there is no metal-to-metal contact whatsoever between the hardened steel base plate and the rest of the glide. The base is completely insulated by the intervening rubber cushion. In addition, the swivel action feature ensures that the glide stands flat so it can't dent or gouge

always stands flat so it can't dent or gouge floor surfaces.

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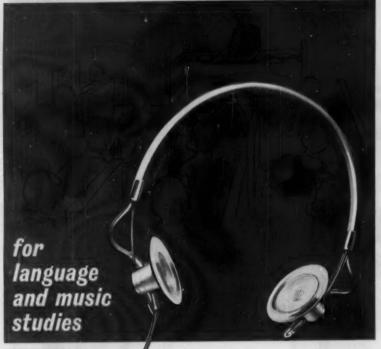
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On the Shelf

(Continued From Page 34)

those who serve in other fields. He notes particularly, and sometimes with longing, the criteria suggested to self-perpetuating boards as to the balance to be achieved among their members in age, sex, occupation, capacity for growth, motivation to accept membership.

For all boards Dr. Houle recommends overlapping terms so arranged that no more than one-half, and preferably no more than one-third, expire at a time. While a lawyer properly serves as chairman of a legal society and a doctor as chairman of a medical society, no librarian should chair a library board nor should a teacher be president of a board of education.

There are wary words about committees and strong ones about the wide latitude the executive should command in staff relations. For the small board committees are counter-indicated. The board member with a serious complaint about the executive should make it to the board chairman, not to the executive, not to other board members, and certainly not to the public.

The book is clean-cut in purpose, direct, clear and vigorous in expression, and frequently epigrammatic. This sentence surely rates gold letters: "A good board is a victory, not a gift."

THE EDUCATION OF NATIONS. By Robert Ulich. Cambridge: Harvard University Press. 1961. Pp. 325. \$6.75.

Education, even when it seeks to change as well as conserve, is an integral part of a nation's history and way of being. It cannot be properly assessed apart from other vital forces or directed as if they did not exist. This unifying idea holds through all man's bewildering heritage and through all the complexities of comparative education.

It gains in clarity and force from the trenchant observations which Dr. Ulich, Harvard's James Bryant Conant professor of education emeritus and editor of "Three Thousand Years of Educational Wisdom," presents in his latest volume. So does the thought that while history has divided humanity into separate parts, "it has also created the world community of civilized men," and that "the greatest in the past of every great nation continues to live in every other nation that participates in the cultural enterprise of the race."

Prof. Ulich examines with us the strands and the patterns as these have been variously plaited from the Middle Ages right up to this morning, and as they may be tomorrow. There are chapters on England, France, Germany, the United States, and Russia, each with a

(Continued on Page 40)

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(Continued From Page 36)

historic background to precede the sections on educational ideologies, emphases and organizations; and there are other chapters on the "New" and "Old" Nations and on the "Persistent Problems of Education."

This space permits only the briefest reference to a few high points in a rich landscape. The following paragraphs omit almost entirely the efforts of Western Europe to widen provisions for all youth. Neither do they adequately reflect the ripe wisdom or the combination of shrewd realism with exalted vision that makes this book a distinguished contribution to good thinking.

Of England. The Norman Conquest established a central government so secure against factions that it could tolerate some dissent - disdain about every function, including education.

The intent to create the "English Gentleman" has persisted from the 17th Century with Eton and Harrow, Oxford and Cambridge still the highest goals. Probably even the less privileged would not like it otherwise. "Social prejudices will still go on - where would they not? Like gossip, snobbery is a strand thoroughly woven into human nature. Everybody is against it, as he is against sin. But, like sin, we would miss it if it did not exist."

To that statement Dr. Ulich adds this word of unqualified admiration: "Our modern world needs a nation . . . that has learned the art of self-correction under high standards. . . . The nations of the world have much reason to study English history and education and to learn from it."

Of France. Officialdom and the leading social groups always will favor a system that sees its noblest purpose in the education of an intellectual elite. The belief of the French in their cultural superiority and the hierarchical structure of their education provide a sense of unity and uniqueness in a nation often politically disunited. This pride is shared (see Of England) even by social groups that participate little in the blessings of advanced schooling. "Hence its effect is not so 'undemocratic' as may appear to an American."

Of Germany. Before Bismarck and unity there was no development of schools or movements that could foster political maturity. After Bismarck, his successors pursued prosperity until great minds felt lonely. Humanism faded into grammar. Both churches taught humility before man as well as God. Teachers and pupils were scared. Hitler kept it that way, and more so.

"No nation should live in a continued state of repentance." But there must be no superficial forgetting and no whitewashing of war crimes.

Because Germans like to work, prosperity is returning. Will it bring cultural rejuvenation and the kind of program that once attracted educators from all over the world? "Metaphysics is necessary to change physics and invention into human blessing."

Of the United States. American education has been stamped with Ben Franklin's hard and comfortable good sense and Thomas Jefferson's democracy. But the extension of opportunity which Horace Mann preached was long in coming. At last, buttressed by prosperity, that extension has put more than 80 per cent of eligible youth into high school as compared with the 7 per cent

Our colleges enroll 30 per cent of their age group as against England's 5 per cent. But with this quantitative growth has come a lowered selectivity that has tended to dim Jefferson's vision of an America in which the natural aristocracy of virtue and talents would be no denial but rather the strength of democracy.

The mechanical reliance on credits without due respect for coherence and standards is the curse of American education. Of the rigorously regulated

(Continued on Page 44)



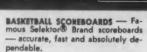
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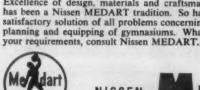
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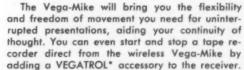
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... yet every word is distinctly heard by his audience, no matter what direction he faces, where he walks, how large the auditorium or classroom. His hands are free, his presentation unhampered. The VEGA-MIKE* Wireless Microphone System has released him from the tethering restrictions and entangling wires of ordinary microphones.

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(Continued From Page 40) schedules of the university, class attendance, examinations after each course, and all kinds of guidance procedures, Dr. Ulich says: "There reigns a pedantic and unacademic climate." There should be more freedom for our students as they become young men and women, more control when they are adolescents.

What America now needs is a combination of the principle of equality and justice to all with the principle of quality. We neglect not only the gifted but the practical student. The author would help the practical as well as the gifted, but not in separate schools; he says we must not end on a level of verbalization too low for the gifted and too high for the practical. We need a combination of our traditional decentralization with concerted and professional leadership as it existed to a high degree between 1840 and 1900.

America is proud of her social mobility, universal schools, technical advance, abundant living, and world role. But there is no blessing in all this mobility unless it creates deeper forms of happiness than a mutual race and scramble. We must achieve a qualitative culture that makes American leadership a matter not only of bigness, but of truly deserved respect among the family of cultured nations.

The author's appraisal of John Dewey is of more than incidental interest. "As a philosopher Dewey was of minor rank if compared with the really great men of thought; as a cultural apostle, he had an immediate influence that only a few university professors have had. . . . But he tolerated too benignly a kind of discipleship that spread his name into groups generally impervious to difficult abstractions, but at the same time oversimplified his ideas and thus perhaps did them more harm than good. . . . Many of his followers failed to recognize that Dewey never tossed out discipline and duty or belittled their importance."

Of Russia. Marxism has brought the most radical transformation of a people in all history — for one thing from 80 per cent to zero illiteracy. But the schools, which in Russia as in all Christendom were in medieval times dedicated to universal values, however thinly distributed, have been converted to an instrument of an antireligious materialism of a crude type. Early experiment in Deweyism quickly gave way to more rigid discipline and an achievement that is chilling not only to America but to every other country.

"The totalitarian system can be frightfully effective in the technical sense of the word." History tells us, of course, that a nation can succeed materially and industrially and at the same time lose its soul.

The Communist doctrine that the state would wither away under the new society already has been proved a pious fraud. The state has become even more powerful.

Of New and Old Nations. Now populations to which even the wheel was a novelty skip the era of railroads and jump to the age of airplanes and unsettling industrial production. Suddenly they feel the impact of a science and technology that it took the West five centuries to learn. But they want other things. However vague they may be politically, they cry for freedom and equality, even as they stand in danger of mistaking the demagogue for the true leader.

It is not only in the minds of men that wars begin, but in their hearts and stomachs. "Communism has more missionaries in Southeast Asia than Protestantism has in the entire world." Falsehood as well as true knowledge can be spread, even in the schools. The future of the new nations will depend on the quality and extent of their education. How can we help? How can we give the requisite tact? The whole budget of UNESCO amounts to only \$12 million!

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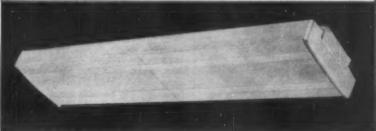
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(Continued From Page 44)

Conclusions. One cannot simply transfer the structure and program of schools from one people to another. The means and goals of education must harmonize with the lives and ideas of men in particular circumstances.

The old countries were wrong in restricting the chance for leadership to the socially privileged classes, but they were right to insist on an elite. Least of all can democracy live without one.

Several of the young nations have built their educational systems upside down - too many higher institutions, too few elementary and practical schools.

For all nations the problem of birth

control rises demandingly.

For some immediately, for all ultimately, automation challenges us to create an education both more exacting for the programers and in itself more satisfying to all of us - an education that will "provide the conditions under which the human goal of inner wealth, personal dignity, and social productivity can be organically connected with an individual's talents, status and occu-

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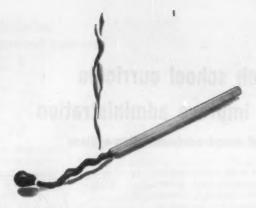
Federal School Officials Foresee New School Designs

WASHINGTON, D.C. - Before the decade is over, schools will be built more economically and more efficiently than they are today due to use of modular design, repetitive use of component parts, new and faster construction technics, and improved building materials. Also, some of the ancillary facilities will be underground.

This is part of the picture of future school buildings drawn by the staff of the school administration branch of the U.S. Office of Education in a series of conferences and discussions.

School planners and architects will be making more significant changes in design, the federal school officials said. In large cities, for example, where land costs are high, there are likely to be schools with underground gymnasiums, auditoriums, civil defense shelters, and automobile parking, with towers above for instruction, utilities and general services.

Other innovations the officials see are: (1) the windowless school, artificially lighted and mechanically ventilated; (2) the "school in the round," which requires less building material, less corridor space, and gives each classroom more outside glass than conventional buildings; (3) movable rooms made up of modular sections, and (4) small neighborhood schools for young children in heavily populated areas.



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has already been through a fire that could destroy your present walls"



This statement is true even of some of the newest school buildings. Their walls meet building code standards — but their WALL-FACES can BURN. In fact, some pre-applied coatings and plastic wall coverings can be ignited by the flame of an ordinary match. Imagine the chaos a "hot" fire could bring!

Each Arketex Structural Facing Tile, on the other hand, has already had a "trial by fire." In the manufacturing process, both the body of the tile and its colorful, glazed face are subjected to 72 hours of intense heat rising to a peak of more than 2000°F. The finished product is a fire-proved building unit that forms both the structure and face of your wall in one installation.

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Once installed, Arketex Facing Tile continues to provide big savings. For all practical purposes the glazed face never depreciates. You can't mar or scar it, even if you try—a test that will "flunk out" many modern walls! Less time and materials are needed for cleaning. You have a truly hygienic wall with high resistance to both fire and chemicals. More and more school builders who consider all costs are specifying Arketex Ceramic Glazed Structural Tile.



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... through an economical sound-communication system

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in the system, Identical functions are available in a vertical console, for use where office space is at a premium.



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Classroom audio-aids can give students access to sources of important teaching materials . . . can place each class in closer relation to the school and the world around it . . . can help develop each pupil's critical faculties. Leading educators value the availability of:

Radio broadcasts: speeches; music; coverage of special events; interviews; important dramatic presentations; sessions of Congress; etc.

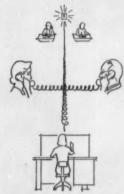
Recordings: from an ever-increasing fund of educational material on tape and discs.

Transmissions from other parts of the school: student musical programs; sports events; etc.

Recording and play-back facilities: for classes in choral and instrumental music; language and speech courses; drama workshops; etc.

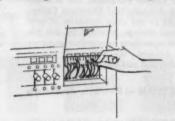
All these audio-aids can be supplied by a single Executone classroom reproducer... the same instrument that handles time signal, alarm and intercom functions. With a standard Executone system, any combination of rooms—chosen by selector-switches—can receive either of two simultaneous sound transmissions. Reproduction is of unusually high quality. Where recording and play-back are desired, rooms need only be supplied with microphone and tapedeck jacks. Amplification takes place at the main control console.

Speed administrative action: relieve over-burdened staff



Freedom to teach—and to work more productively - is one of the best answers to the chronic shortage of teachers and administrative personnel. Time savings increase in direct proportion to the staff's communication capabilities. Today, these can economically include: A) 2-way electronic voice intercom . . . between the office and any classroom . . . with complete privacy safeguards. B) Privateline room-to-office and room-to-room intercom . . . with call origination from any point. The Executone system offers all the above, providing 2-way remotereply intercom through each classroom speaker... optional private-line handset communication using an independent channel carried by the same wiring.

Save money & space in providing variable time programs



Classes with varying time requirements need no longer be subject to an inflexible set of signals. But conventional time-programming equipment—including independent crossconnect panels, relay racks, classroom buzzers and wiring systems—is bulky and expensive.

The Executone system includes a remarkably compact, easily accessible peg-board programmer—which allows each classroom to be placed on any one of six different time programs within seconds. This function is built directly into either standard consolel The costly conventional system is eliminated.

Preserve student discipline during unsupervised intervals



When teachers must leave their classes, the maintenance of discipline usually depends on the presence of a substitute. Faculty members may now be relieved of this non-productive extra duty. Unattended students can be monitored from the Office—through the Executone speaker—and notified by its open-line signal light that they are under remote supervision.



Control student transportation

Teachers find it especially difficult to keep order—and prevent delays—when restless students must await loadings of homeward-bound school buses. This condition is relieved when children are permitted to play freely—until summoned to the loading area in proper groups and directed to their buses.

This can be achieved through an inexpensive adjunct to the Executone system: a microphone jack at the loading area and speakers at loading and congregation areas. Both microphone and speaker wiring run in the same conduit. The amplifiers at the main console are utilized. Any available microphone can be plugged in at dismissal time.

Preserve the continuity of classroom activities



Communications in the modern school go a long way toward assuring uninterrupted class activities. But care must be taken that the facilities which make this possible are not themselves a disruptive influence. This is the case where calls make it necessary for teachers to drop what they are doing, to approach or handle equipment... or where a call interrupts a sound transmission.

Executone removes both of these contingencies. Through-the-speaker calls, for brief conversations, can be answered by the teacher from any point in the room—without raising her voice. And use of the optional handset channel for longer conversation prevents interference with concurrent sound programs.

Prevent confusion and panic in emergencies

Leading administrators have long felt the need for greater control of student bodies in emergencies. They seek alarm signal facilities to augment standard fire alarm systems—for such special contingencies as air raids. To control student movements in critical situations, they wish to make it possible for any staff member to broadcast voice instructions—without having been trained in the use of sound equipment.



In the Executone system, the same components used to produce time signals will also provide supplemental alarms. Executone furnishes duplicate signal generators—for fail-safe standby duty. For follow-up voice instructions, after an alarm, a staff member need only touch the 'emergency' bar at the Executone console. This overrides all other transmissions . . . allows him to speak immediately to the entire student body.



Provide quality-controlled sound for audience activities

No audience facilities are so intensively used as those in the modern school. Auditoriums and gyms serve not only during the school day—but also for adult and community activities... for socials and special events. Sound reinforcement equipment must be designed to high standards. And controls must be efficient. Conventional microphone mixing units—because of A-C power, ventilation and space needs can seldom be situated where they do most good.

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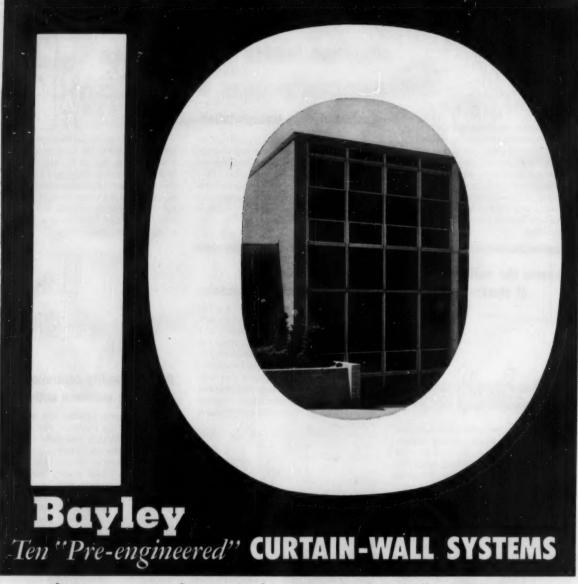
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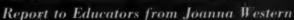
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Vol. 67, No. 5, May 1961



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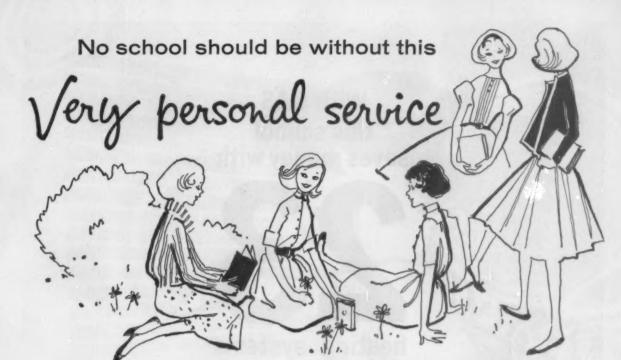
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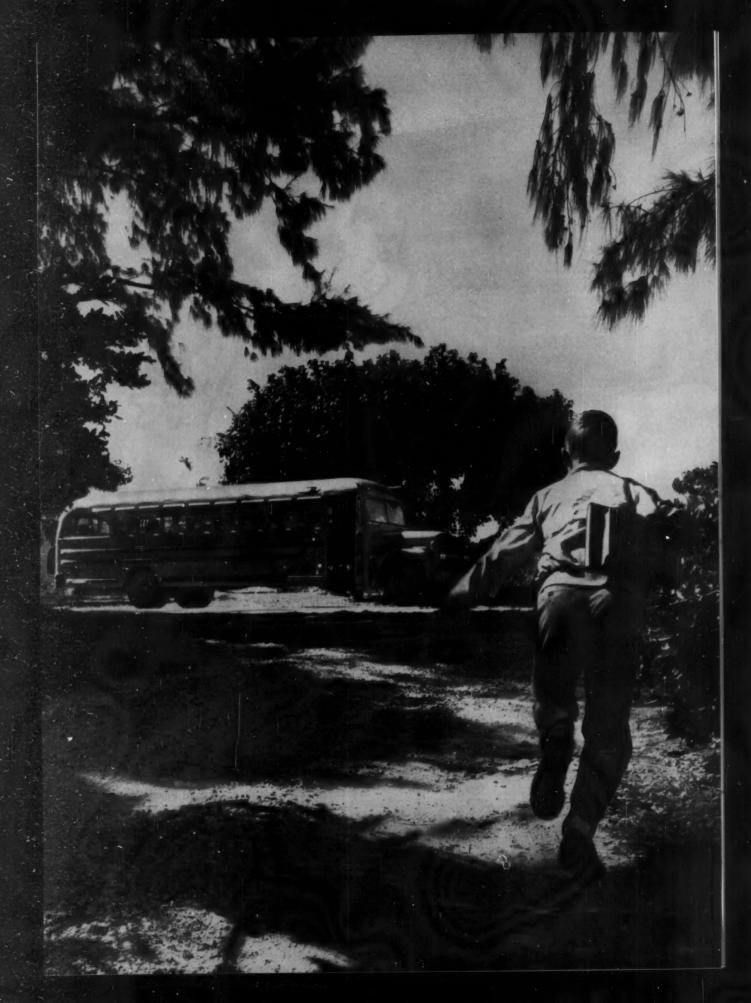
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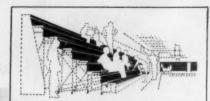
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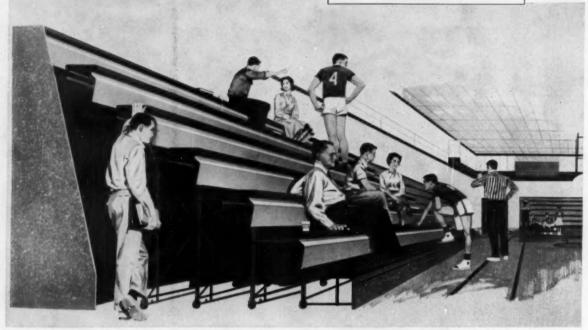
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LOOKING FORWARD

The Meaning of the Resolutions

WHY are resolutions adopted at conventions so little appreciated? Why did the resolutions adopted by the American Association of School Administrators receive so little publicity?

Relatively few of the school administrators who registered at any of the three regional conferences this year took the time to cast a ballot expressing their acceptance or rejection of the 24 proposals from the resolutions committee. Of those who did vote, 90 per cent or more approved the proposals.

The resolutions stated principles and policies that should be applied to the current scene. But we are guessing as to what some of the resolutions really mean.

Back of every resolution there are hours of study, discussion and investigation. When the essence of such study is squeezed into one or two abstract sentences, as the nature of resolutions now requires, not only is the nourishment taken out of the substance, but the substance itself is so dehydrated that little flavor is left.

The resolutions adopted by those who bothered to vote on them at the A.A.S.A. regional meeting constitute a worthy text for a discussion of the critical issues of the day. We will comment on several of them, and then offer a plan for making resolutions far more meaningful in the future.

No FEDERAL DREAM

The first resolution was timely and appropriate. It pledged the Association's full support to President Kennedy's thesis that federal appropriations to the states should be "utilized as the states best see fit to improve the quality of public education." President Kennedy's denial of any dream or plan for a federal system of education deserves many more amens than we heard in any of the three regional auditoriums.

The A.A.S.A. comes out unequivocally for the *inter-mediate* school district unit in Resolution Six. The resolution sees the intermediate unit as an opportunity for the sharing of educational services, such as guidance, health departments, and audio-visual facilities.

A strong position for extending the *public* school program two years beyond the high school is expressed in Resolution Seven.

Resolution Eight repeats the A.A.S.A.'s emphasis on the great value of the kindergarten and the belief that it should be a part of the public school ladder. Deserving special attention at this time is Resolution Nine on adult education. It reads: "The A.A.S.A. believes that a comprehensive and diversified educational program for adults should be an *integral* part of every school system. To this end the Association urges local and state boards of education to make provisions for educational opportunities at the adult level for all who desire and can profit from such experience."

It's time that adult education be something more than a stepchild in the public school scheme. As Martin W. Essex said at the St. Louis meeting: "We need adult education to keep our skills modern." And as Finis E. Engleman has been pointing out: "The re-training of our adult population for new occupations has become one of the big problems of our society." Finis anticipates that a typical child in school today will have to prepare himself vocationally for four different occupations within his lifetime. This resolution holds the public school responsible for the education of adults not only for literacy and wise use of leisure time but also for vocational efficiency and civic competence.

The debate on the length of the school year was not overlooked by the resolutions committee. Resolution Ten says, in effect, that not only must we extend the school year but also expand the use of the school's facilities every day of the year.

WHERE RESEARCH FAILS

Research is a subject that cannot be overlooked by a resolutions committee, and it wasn't. But neither was current research given a clean bill of health. A resolution diplomatically reminds those who are planning and spending large sums for so-called educational research that there is a need to relate these findings to practice. The resolution also suggests that numerous school districts could advantageously combine their resources for effective research.

A question that was hotly debated at all three regional meetings was whether the control of the curriculum should extend beyond the local school district and even beyond the state. This issue received a very positive answer from the resolutions committee, a fact that may not be known to members of the A.A.S.A. who haven't read Resolution Twelve. It states: "The Association reaffirms its faith in the ability of local boards of education, working in conjunction with members of the teaching

profession, to select wisely the instructional materials for our schools."

One can read into this resolution the assumption that the A.A.S.A. does not favor any congressional control over the curriculum, nor does it look with favor upon proposals for regional curriculum study centers supported by federal funds.

The professional preparation of the school administrator is certainly an appropriate topic for a resolution, though it happens to be No. 13. This resolution expresses appreciation to those institutions that have made real progress in developing programs of preparation in school administration, and especially to those that have "incorporated field experience under careful guidance as an integral part of the total planned sequence of preparation."

Resolution Fifteen on personnel policies should be of special interest to classroom teachers. The A.A.S.A. officially recommends "establishment of appropriate policies of releasing, without loss of pay, teachers who are invited to serve as participants in conferences and conventions of major professional organizations at local, state and national levels."

Resolution Sixteen expresses the theory that teachers (and we presume administrators, too) are entitled to exercise their political rights as citizens, even to the holding of office. It does not tell the profession how these rights can be exercised without danger of criticism or even losing one's job.

WEAKNESS OF EXCHANGE PROGRAMS

What did the resolutions committee say about exchange programs for students and teachers? Resolution Seventeen seems to say that these programs are good as far as they go, but they need more planning and guidance, so that both the exchange and the community get more value out of the experience. Also, suggests the resolution, there should be more exchange of students and teachers within the country as well as the continuation of exchanges with other countries.

Resolution Nineteen is a direct appeal to the National School Boards Association "to continue to study and to recommend effective procedures for identifying, recruiting, selecting, orienting and retaining school board members whose qualifications for office and devotion to public education assure each school district of statesmanlike leadership." Worthy of study is the caucus plan, by which school board candidates are asked questions at public meetings. Some say that the caucus tends to reveal competence or lack of competence on the part of school board candidates.

MISSED THE BOAT

The resolutions committee missed the boat with its statement on the U.S. Office of Education. It affirms that this agency needs to be strong, effective and sensitive to the needs of education throughout the nation, but it neglected to state that the best way for this to be accomplished would be to remove the Office from the influence of partisan politics. Here was an opportunity to reaffirm a proposal that repeatedly has been endorsed by the A.A.S.A. and also by the Council of Chief State

School Officers, namely, the establishment of a national nonpartisan independent board of education to conduct the affairs of the U.S. Office of Education. Its responsibilities would include the appointment of the U.S. Commissioner of Education and evaluation of the activities of the Office. The resolution vaguely recognizes that partisan political domination of the Office is unavoidable under the present pattern.

INVALID USE OF TESTS

Those who are alarmed over the use of tests that do not originate within the district's own curriculum will find strong support for their fears in Resolution Twenty-One. It reads in part: "The misuse of tests and the misinterpretation of test data continue to be a glaring danger to good educational programs. Any testing instrument should be selected and used in terms of what a particular school has intended to teach. To judge a school solely on the basis of data derived from any battery of examinations is an invalid and dangerous venture."

We read into Resolution Twenty-Two a warning to foundations that have been allotting huge sums for education projects. The resolution reads in part:

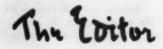
"Responsibility for accurate and comprehensive communication rests with both the educational leaders and the leaders in the field of communication." This seems to say that not only the reporter and the magazine writer but also the spokesman for foundations and associations have a responsibility for reporting accurately and adequately, without prejudice and without propaganda, the facts which they are in a position to communicate.

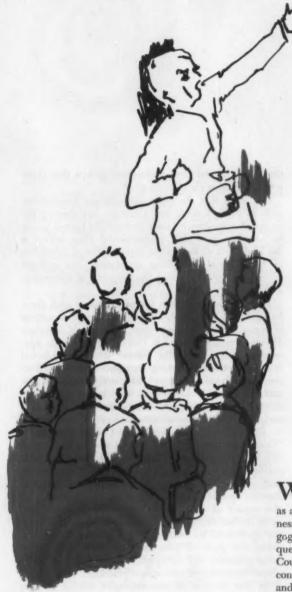
UNETHICAL SCHOOL BOARDS

The next resolution was a call for action against unethical school boards. Its presentation at St. Louis was especially pertinent, since it was while attending the St. Louis meeting that Supt. Wendell Godwin was called back to Topeka, Kan., by the school board that summarily dismissed him. The resolution reads: "Increased dismissals of school administrators without warning or without recognized ethical and sound personnel procedures is a matter of grave concern to the Association. The executive committee is requested to take appropriate steps to develop with the National School Boards Association a plan of action designed to remedy the situation."

We promised to suggest a plan for making these resolutions more meaningful. The idea is short and simple.

The press office at the A.A.S.A. conventions provides reporters with copies or summaries of speeches. Why not also provide the press with examples of the application of these resolutions? The expense would not be too great even to provide the membership with an addendum to these resolutions, illustrating the basic meanings. This might be one way to make these resolutions more meaningful to the press and to the profession.





Speaks
For Education?

By LINDLEY J. STILES

Dean of the School of Education University of Wisconsin

WHO'S calling the tune for public education in the United States? This question keeps popping up as an array of critics point their fingers at various weaknesses, real or alleged, in our schools. Is it the pedagogues in colleges and universities, as has been frequently charged? Or have the pedagogue-baiters of the Council for Basic Education, Inc., won the public's confidence? Does the National Education Association and its multiple affiliate organizations, reported to be the biggest lobby in Washington, D.C., exercise the power it claims or is often accused of wielding? What about the influence of the Educational Policies Commission, which is charged by the teaching profession to chart the course for education? Or does the Chamber of Commerce, the National Association of Manufacturers, or some similar group control public opinion about schools? What about the National Congress of Parents and Teachers, the National School Boards Association, and American Federation of Teachers, and

Reprinted by special permission of the author from an address delivered before the John Dewey Society on March 11, 1961.

Who is shaping the educational program of tomorrow? Conant? Rickover? Bestor? Perhaps the ghost of John Dewey? American education, says this jury, is diverse and autonomous; thus no one can speak for more than a small segment

the hordes of civic and professional groups that make pronouncements about education?

Can it be that the great philanthropic foundations, such as Ford, Kellogg and Carnegie, are shaping the course of education by their strategically placed grants to stimulate particular developments? How potent is the leadership of the United States Office of Education or the regional accrediting association? Are colleges and universities controlling the programs of elementary and secondary schools?

Perhaps the spokesmen for education, if such there be, speak as individuals rather than as representatives of organizations. To what extent, for example, is former Harvard President James B. Conant designing the educational programs of the future? Are Vice Admiral Rickover's views becoming the guidelines for tomorrow's schools, as many fear? What is the impact of men such as John W. Gardner, who helped write the famous Carnegie report, "Excellence in Education," and the recently released statement on "National Goals in Education" in the President's Commission report, "Goals for Americans"? Or what is the impact of Paul Woodring, whose weekly column, "Woodring on Education," appears in newspapers throughout the country and who edits the recently inaugurated Saturday Review special "Educational Supplement"? What is the impact of the U.S. Commissioner of Education, or of Author Arthur Bestor? Possibly, the most influential spokesman for education is not a man at all, but rather the ghost of John Dewey whose influence, as some maintain, still outweighs contemporary efforts to shape the destiny of educational practices.

In the absence of comprehensive studies on this subject, an attempt was made to extend insight relative to "who is speaking for or is being heard on education today?" by polling a jury of selected experts on public reactions. Among the 22 participants were 12 editors of leading newspapers and popular magazines who have given attention to the great educational controversies of the times. The jurors included also the vice president of a major radio and television network (A.B.C.), two representatives of business associations, two officials of professional organizations (one also a college president), four superintendents of schools, and one former elementary school principal.

No claim is made that the distribution is balanced or

appropriate, or that the number involved is an adequate enough sampling to represent everybody's views. Whatever value the judgments reported may have lies perhaps in the logic of separate analyses as well as in the agreements found, and in the fact that each comes from an individual of recognized competence who is in a position that permits him to gauge the public's responsiveness to educational leadership. The procedure produced interesting and penetrating responses that help deepen understanding of how education is influenced in the United States. The replies, in virtually every case, revealed that the respondents — all extremely busy people — reacted to the question posed with complete dedication to its importance.

No national voice. Remarkable agreement prevailed among this unofficial jury of experts that, while many may try, no one speaks for education. Paul Woodring, editor of the Saturday Review "Education Supplement" and author of the weekly column "Woodring on Education," puts it bluntly:

The answer to the question, "who speaks for education to the public at large?" is nobody. I doubt that the name of any educator in the nation is known to more than 2 or 3 per cent of all Americans. Possibly Dr. Conant is an exception.

John R. Miles, manager of the education department of the United States Chamber of Commerce, agrees with Dr. Woodring that Dr. Conant is "probably the only rallying point in educational improvement on the horizon in recent years," and identifies the major reason why no one can speak for education on a national scale:

The public is really comprised of many publics . . . divided into highly provincial publics which reflect in their own actions a regional viewpoint on the function and organization of education. This provincialism is so strong that it often is a barrier to contact with, as well as acceptance of the views expressed by, experts. . . . This is by way of saying that many of the school problems that exist regionally must be worked out, in my opinion, by provincial leaders in their particular contexts and cannot be resolved on a national basis or by national organizations or authorities — unless there is resort to the power of the federal purse to require new methods, organization or curricular emphasis in education.

The local nature of educational influence was a reoccurring theme throughout the responses. Glenn Matthew White, associate editor, *Ladies Home Journal*, states the case for all respondents:

Education in the United States is so diverse, and it is autonomous, that no one is the spokesman for more than a small segment.

Official educational leaders not widely recognized. One might presume that, because education is a state responsibility, people would look to their state superintendents of public instruction as their spokesmen. And, with the growing concern for education at the federal level, the views of the U.S. Commissioner of Education would be expected to assume more importance in the minds of people.

One state superintendent of public instruction, George E. Watson of Wisconsin, was mentioned by an educational editor of The Milwaukee Journal in the same state. One suspects, however, that the comments of Donald Caswell, educational editor of the Los Angeles Examiner, describe more accurately the general attitude toward the leadership of such authorities:

Among governmental agencies, few people can see beyond their local school board and the local property tax. There is some dim awareness of state school officials, even less of the U.S. Office of Education.

National pronouncements reflect rather than create local attitudes. The general agreement among respondents that influences on education tend to be local rather than national raises a question about how we can account for the fact that certain educational changes that have been advocated by the critics seem to be sweeping the country. One explanation is that local attitudes, from community to community, merge into nationwide criticisms rather than result from such pronouncements. For example, the so-called "return to the three R's" had been brewing throughout the late 1930's as parents and some teachers in local communities rebelled against extreme interpretations of Progressive Education.

During World War II, this movement was stimulated further by the comparisons that took place as families migrated from state to state. An added factor was the weakening of schools that resulted from such factors as turnover of teachers, the increases in class

Recent national pronouncements concerning education have reflected — rather than created — local attitudes toward our public schools

size, and the transient nature of many school populations during war times. The consequence was that at the end of the War a nation which was already uneasy about the Progressive Education movement and anxious about its own survival (in a world in which the first atomic bombs had just been exploded) already had created the climate that made Rudolph Flesch's book, "Why Johnny Can't Read," a best seller. In such a situation, the critic's role was one of capitalizing on, rather than creating, a trend.

Evidence could be cited to show that similar circumstances were related to the current emphasis on such trends as the identification and planning of special programs for the gifted and the emphasis on liberal education and knowledge of content in programs for the education of teachers. Even the apparent explosive interest in science that seemed to follow the launching of the first Russian satellite had been simmering since the advent of atomic fission in 1945. Russia's dramatic success served to ignite attitudes toward the importance of science in today's world that already were developing in communities across the nation.

The fact that the national pronouncements which get attention tend to reflect rather than to create local attitudes can be illustrated by the leadership and public acceptance of Dr. Conant's views on educating the academically talented students in high schools. His recommendations were based on personal observations of good practices in representative high schools. During his study he conferred extensively with both lay and educational leaders. He was careful to recommend practices, according to his own admission, that he already had seen in successful operation in one or more schools and which no doubt he felt were reasonably in line with the best of the public's thinking. In fact, Robert M. Hutchins criticized his recommendations for being too much in tune with what people wanted to hear about their schools. Because they were compatible with local attitudes, the recommendations are receiving a high degree of acceptance.

On the other hand, when nationwide criticisms of

schools have proved incompatible with local attitudes, they may be just as readily rejected. Donald Caswell of the *Los Angeles Examiner* reported an interesting opinion on this phenomenon:

I have a private theory that the man on the street is most deeply influenced by some person he happens to know who has a school connection of any kind — be he a school janitor, a school clerk, or a school bus driver. The "inside" opinion of a personal acquaintance outweighs all the public utterances of the Conants and Rickovers.

This explanation may account for the fact that, although it is true, as Erwin D. Canham, editor of the Christian Science Monitor, writes, Vice Admiral Rickover "got deep into public thinking," yet his major recommendations for schools still go unheeded. These include, among others: the recommendation that the 50,000 separate school boards be either replaced or augmented by a national board of education with power to prescribe curricula and standards for schools; the suggestion that the European system of separate high schools for gifted students be established; the recommendation that the sciences should replace the social studies and the humanities as the core of the liberal education programs of schools and colleges. The general feeling is that although Vice Admiral Rickover shocked people into thinking about their schools, an applauded contribution most people recognize, his views have not proved popular as solutions to educational ills.

One member of the jury, Bob Brown, a former elementary school principal with considerable editorial experience, maintains that the attitudes held by parents about schools are influenced more by the experiences their children report than any other single factor. Parents accept or reject any would-be spokesman to the degree that his statements on education are verified by what they hear from and see in their own young-sters.

College presidents exert influence at local level. A number of those who were good enough to share their judgments believe that college presidents, whether or not they are competent to lead or interested in elementary and secondary schools, exert considerable influence on school policies at the local level in their states or regions.

Richard Philbrick of the Chicago Tribune explains their impact as follows:

Large numbers of parents are aiming their children toward college. College administrations, personified by college presidents, decide what the children must do to be accepted by a college. Therefore, when college presidents suggest educational policies for grade and high schools, the public interprets their statements as setting forth requirements college-bound youngsters must fulfill.

Local and state educational leaders were reported as being heard on education, provided, as Robert Dishon of the *Milwaukee Journal* explains, they are willing to speak frankly and face sincerely the question: "How do we know what we are doing is the best way of doing it?"

Sidney Sulkin, associate editor, Changing Times, the Kiplinger magazine, amplifies and extends this:

Educators themselves are by far the most effective spokesmen in the field of education — that is, when they are bold, lucid and concerned with the problems that trouble the public. Unfortunately, only an extremely few educators — college presidents, school superintendents, principals, professors, teachers and the like — speak out at all on the problems of general "consumer" interest. Most tend to speak in professional language and to deal with problems of the profession. The problems that trouble parents and students — that is, the public at large — are personal: Is my youngster getting a good education? How can I tell? Should he go to college? Where? How can I pay for it? What should he be?

"Laymen," according to Mr. Caswell of the Los Angeles Examiner, "who criticize the schools always have some impact, regardless of their qualifications. Laymen who defend the schools are usually suspected of somehow being toadies for the 'educationists,' with obscure motives."

Impact of foundations sometimes transitory. Opinions relative to the influence of philanthropic foundations ranged from skepticism as to their long-range influence to moderate enthusiasm for their impact on schools. Supt. George B. Brain of the Baltimore public schools explains the skepticism that he believes exists in Maryland:

We have had some experience in this state with foundation grants which have been available for special purposes but which have been short term in duration and have left with local communities and with the state the problem of continuing to finance educational innovations which have been encouraged through foundation assistance.

A contrasting view comes from Benjamin C. Willis, general superintendent of schools, Chicago, and president of the A.A.S.A.:

At the present time, it would appear that the foundations are having great influence through their releases and through speeches made by members of the group.

Another superintendent of schools, Henry I. Willett of Richmond, Va., expressed concern over the role that certain foundations have been playing in shaping the direction of education. The fact that he believes educators should criticize foundation leadership when they think it in error perhaps testifies to the impact the foundations are having.

Too many educators cloak too many utterances in professional sounding language that nearly always ignores problems of the 'consumer'

Richard P. Kleeman, education writer for the Minneapolis Tribune, reveals more enthusiasm for the contributions of foundations:

Although it may sound presumptuous, I would say that I have been generally impressed by what they had to say in the field of education — particularly the Fund for the Advancement of Education and the Educational Facilities Laboratories, Inc., the two I know best. I recognize that not all educators have taken kindly to some of their approaches, but I suspect a good deal of this represents fear of change or outside influence.

Several editors report that they find material pre-(Continued on Page 156)

Where Students

Monitors, Joel Carr, meets with his secretary, Judy MacCorkle, to discuss list of Hall Warnings issued by the 200 monitors under his direction. These monitors are responsible for the conduct of students in study halls during class periods.



All photos by Mike Weingart, Skokie,

Maintain Much of Their Own Discipline

STUART A. ANDERSON

Assistant Superintendent Niles Township Community High Schools, Skokie, Ill.

STUDENT morale was good but not of a quality necessary to place the school in a position of leadership at Niles Township High School, Skokie, Ill. That was seven years ago.

The point of lowest student morale was the study hall. Teachers hoped to avoid study hall assignments, and, generally, strong disciplinarians were given that task.

Today, not one single faculty member has a study hall assignment. Students supervise all the 75 study halls and also do corridor and library supervision. In fact, we now have one unsupervised honor study hall.

Started as an Experiment. The study hall program started as an experiment in 1953-54 with a one-half period at noon. It was organized on a democratic basis with the students in the study hall making the decision to enter the experiment and choose their own officers. The initial experiment proved successful, and the administration asked that the program be continued and expanded. The student council gave help for the first three years, but soon the Student Service Organization (S.S.O.) became larger and operated as a separate organization.

The program developed very slowly. Nothing was added until everything undertaken was operating efficiently. Because of this careful planning, there have been no cutbacks. In its second year of operation, 1954-55, there were only two one-half hour study halls under student supervision for the first semester: A full-period study hall was added the second semester.

Promotional Program Extension.
At this point an intensive promotion-

al program was initiated. The head supervisor of Student Supervised Study Halls (S.S.S.H.) met with each class cabinet and the executive board, or the entire membership of all influential clubs in the school, presenting the objectives and expansion plans of S.S.S.H. and asking for their endorsement. He was successful in each case. Finally, assemblies were held in the spring for the sophomore and junior classes in which their endorsement of the plans for expansion the next fall was obtained. At first only juniors and seniors participated.

Publicity was given the plan in the school and local newspapers, the emphasis being on faith in teen-agers. Teen-agers were mature enough to take care of themselves for one hour a day, it was argued. No adult need watch their every move. This is still the basic philosophy behind the S.S.S.H. organization.

A crucial test of the program came during its third year of operation, 1955-56. Students at times became critical of their peers as study hall officers, but they did not condemn the plan itself. At this time all S.S.S.H. officers became very "public relations" conscious, using every possible opportunity to create good will among their peers.

The plan is operating only in the high school's East Division in which more than 1900 juniors and seniors are in attendance. Freshmen and sophomores attend the new West Division. The program, however, has operated on all four grade levels. The S.S.O. program in 1959-60 consisted of 75 different study halls each day, seven periods of corridor supervision, and seven periods of special service. More than 400 student officers participated.

Excellent Leadership Program. While the original purpose of S.S.O. was to improve student morale at Niles, the program has proved to be excellent leadership training. Also, the equivalent of six or seven teachers' salaries is being saved each year. However, money saving is not the real purpose of S.S.O.

It is rather difficult for one who is in the school system to make an objective evaluation of the program. The faculty and administration are generally enthusiastic about the plan and its operation. At first many of the teachers were skeptical about the idea, but their skepticism has been replaced by enthusiasm.

A survey taken by the students in the study halls in November 1958 indicated that more than 90 per cent of the students prefer student supervision in study halls. Teachers and administrators report that the influence of S.S.O. has improved the attitude of the student body toward leadership by their peers, both in and out of classes. At first there was some resentment when one student disciplined another, but today few challenge the right of an S.S.O. officer to take disciplinary action. At times they may question the judgment of the officer but not his right to issue hall warnings or detentions.

Adolescents, even the best, occasionally will fail to come through on a responsibility. To meet this problem S.S.O. is now organized on a basis of areas of responsibility, with each officer being held to strict accounting by his superior officer.

"Bouquet" and "Boner" Sheets. Student officers check on those responsible to them, rather than having a teacher or another adult do so. A



TRAINING SESSION for study hall supervisors and assistants is conducted by Mark Johnson, head supervisor of Student Supervised Study Halls (top photo). He demonstrates the need for using a quiet approach and not shouting across the room to discipline a student in the study hall.

S.S.D. SUPERVISORS, Terry Engel and Jerry Hildebrand (right photo), show how to check a student into the library. Special Service Division is responsible for checking students into and out of the library. It regulates the flow of students into the stack room and inspects books to determine if they have been checked out properly. The librarian thus has more time for other duties.

STUDENT CHAIRMAN of S.S.O., Jim Tansor (right photo), makes a routine executive board check on a study hall. Weekly checks are made by members of the executive board or by head secretaries.

Ratings are based on order in the room, personal conduct of officers, and the efficiency with which the officers conduct the study hall.

HEAD SUPERVISOR Mark Johnson (lower photo)
answers the telephone during an executive board meeting.
Key personnel of S.S.O. must call and report
its absences to head supervisor during first
period of any day so plans may be made for
replacements. Marcia Braverman, head secretary
of S.S.S.H., issues and checks back
about 11,000 passes each year, clears attendance
discrepancies, communicates with S.S.S.H. staff,
and keeps minutes of S.S.S.H. meetings.







Student supervision improves student morale, provides excellent leadership training, and saves money

"bouquet" and "boner" system has been developed as a good-natured way of alerting officers. These sheets go no farther than the supervisor who initiated them.

The S.S.S.H. supervisor may get a correctly signed faculty pass and fill it out improperly, perhaps writing the wrong date. He selects a student from the S.S.S.H. and instructs him to try to get the secretary to sign him out on the irregular pass. The student also is given a sheet with a picture of a large bone with the inscription, "You pulled a boner," and another sheet with a picture of a bouquet and the statement, "A bouquet to you for being on your toes." If the secretary accepts the irregular pass he hands her the "boner" sheet, and if she refuses to allow him to leave she is handed the "bouquet" sheet.

The executive board members, or head secretaries, take turns making observations in the S.S.S.H. and then submit written reports to the supervisor, who relays the information to the officers involved and commends or counsels them according to the need. This is done weekly.

Methods of Enforcing Discipline. How does the student officer in a study hall of 70 of his peers enforce discipline? A tradition has been built up in the student body that student officers supervise the study halls and that the student body cooperates with them. The personnel selection committee, made up of about 45 stu-

dents, tries to select student leaders who already have a natural following.

The chairman in the study hall room is trained to use devices that teachers have found to be effective, such as separating friends, transferring students to different study halls to break up groups of friends, and keeping routines, such as requiring students to be in their seats when the bell rings and limiting the number of persons who may be out of their seats on legitimate business at any one time during the period.

For the few remaining dissenters, the student officer first seeks their cooperation. His next step is to warn the student that repetition of the troublesome act will bring a one-half hour detention to be served after school. The S.S.O. executive board supervises this detention hall. Several well placed detentions usually do the job of getting a troublesome study hall in line.

For the very difficult student there remains a conference with the period supervisor, then the head supervisor of all S.S.S.H., and finally the S.S.O. executive board. Somewhere along the line one of the study hall chairmen or the monitor supervisor volunteers to try working with this individual, and the student is transferred to his jurisdiction. Athletes are helpful here.

If all of this procedure fails, the faculty sponsor of S.S.O. has a conference with the student, and as a final step the student may be ex-

pelled from the study halls by action of the S.S.O. executive board and turned over to an assistant principal, who is a disciplinary officer for the school.

With 1900 students in study halls last year, only 140 detentions were issued; neither the assistant principal nor the sponsor of S.S.O. was called upon for disciplinary action.

If a student leader demonstrates that he cannot supervise a study hall, the officers transfer him to some other S.S.O. post. If he should become a problem in the study hall supervision, he is dropped from the organization by action of the S.S.S.H. committee. At the middle and end of each semester, the entire S.S.O. staff is evaluated by the superior officer, who recommends that they be continued or dropped.

Student Officers Evaluated. All students in S.S.S.H. are given an opportunity to evaluate the effectiveness of the study halls. The midsemester survey gives the students an opportunity to evaluate their S.S.S.H. officers and serves to point out officer weaknesses. Students rate the quietness of the study hall, the effectiveness of the officers, and the manner in which the officers obey the rules.

One of the major responsibilities of the faculty sponsor of S.S.O. is that which in the Y.M.C.A. is called "promotion." The officers of the organization must be made to feel that they are doing a worth-while job and

FACULTY DIRECTOR of S.S.O., George V. Roth (left photo), dictates a letter to Sharon Buckman, student, who works 1 ½ hours daily in S.S.O. office. S.S.D. SUPERVISORS, Jim Calamaras (at left in right photo) and Barry Humphrey, check lockers to see that they are locked properly.

Locks are inspected twice weekly. If a lock is missing, unlocked, or locked on the hasp, a Lock Warning Notice explaining the irregularity is sent to the student who uses the locker.





receive some form of recognition. The whole student body as well should have a feeling that their cooperation is something that sets Niles apart from most high schools and that they are being treated as mature, young adults, capable of studying without adult supervision.

Role of Faculty Sponsor. Leadership training, both formal and informal, is a large part of the faculty sponsor's job. Most effective teaching takes place, however, when an individual officer comes into the sponsor's office with a problem or brings a problem to committee meetings and a solution is reached cooperatively. The top-level officers soon learn what real adult responsibility means. When they make a "little error" they discover that it may affect hundreds of people and that they will have to work their way out of an embarrassing situation. They learn that they must resolve tensions that arise in student-officer relations, as well as interofficer tensions.

While the faculty sponsor is often the point of contact in these problems, the issue is referred to the proper head supervisor, and the officers and the sponsor cooperatively work out solutions. This technic has proved quite successful in solving problems with a minimum of friction. Because of the large volume of office work involved, a part-time adult clerk-typist is employed. She works two and one-half hours a day in the sponsor's office.

We have found it necessary to have teachers assist in all S.S.S.H. for the first week of school, as it is impossible to be assured of a full set of officers in each S.S.S.H. the first day. Also, the student officers are new and need some help in getting started. During the last three days of school in June, teachers sit in the back of the study halls to assist, if needed, in assuring a "normal closing" of the school year.

How To Initiate Such a Program. Schools planning to initiate a similar program should: (1) give the faculty member sponsoring it enough time to do the required work; (2) start small, and (3) not add to the program until that which has been established is firmly entrenched in the school.

Students Supervise Hall Monitors. Student Supervised Monitors (S.S.M.) is the second phase of S.S.O. Niles has had different forms of hall monitor systems working with varying degrees of success for several years. However, because of the success of S.S.S.H., the administration requested that it be reorganized so the hall

(Continued on Page 168)

9

THREE out of four administrators responding to this month's opinion poll want the responsibility for determining the content of the curriculum to rest principally with the local school board and professional staff.

Local educational leaders [rather than representatives of state, regional or national interests and forces] "know better the needs, abilities and interests of the student and are better qualified to determine curriculum," said a Wisconsinite, presenting the argument of many superintendents.

"With informed leadership on a local level I believe that items of state and national interest and concern will receive proper attention," stated a schoolman from Michigan.

One offical reminded: "Curriculum development is a professional task and should be the responsibility of a trained administrator who will work cooperatively with his staff in developing a curriculum to meet local needs."

"Although local autonomy can result in inadequate educational opportunities for children," declared an administrator from Iowa, "control at a higher level has historically been much more dangerous."

Many of the majority group were willing to recognize a limited role for the state in deciding curriculum content. Commented a South Dakota respondent: "State requirements as to what subjects should be taught are important in order to have some uniformity in the schools. But these should be minimum requirements." Agreed a schoolman from Pennsylvania: "Basic minimum curriculum should be coordinated at the state level, with sufficient optional opportunity to meet local requirements."

A Texan suggested that "evaluation [of curriculum] by the state could determine if responsibility had been discharged" at the local level.

Some respondents would have a national curriculum standard. "National survival well may require some minimum standards at the national level in regard to curriculum content," stated a Michigan educator. "I don't believe that circumstances permit us the luxury of each school district's independently going its own way."

An Illinoisan called for minimum

'Curriculum Should Be Determined by Local Board and Professional Staff'

standards by the federal government "to exceed considerably the average curriculum of the country at present."

One schoolman "can see a need for an outside force to exert pressure for curriculum improvement in many areas." He does not object to minimum standards at either the state or national level.

One group of respondents considered "advice" or "suggestions" on curriculum content from sources other than local to be in order. Said an Arkansas superintendent: "Many local communities lacking strong, professional leadership need assistance in making an intelligent determination of curriculum. They should receive advisory help from regional, state and national sources, but the final decisions should be made locally."

Let curriculum planning be tied to state, regional or national objectives was the suggestion of a Minnesota schoolman. The published findings of research from universities and state departments could aid curriculum planners, another official said.

"Organizations such as A.S.C.D., A.A.S.A., N.A.S.S.P., and others already have assisted school districts in forming uniform educational opportunities," mentioned an administrator from Indiana.

A New Jersey respondent warned against the "legislator having a personal ax to grind. He could conceivably incorporate all types of gimmicks into a school curriculum."

Twenty-five per cent of the respondents believe that state, regional

or national influences should be the principal determinants of the content of curriculum. Most of them mentioned a need for "flexibility at the local level."

Local school boards are "many times not qualified," and they are "too tax-conscious," according to two Nebraskans. They have views on curriculum that are "too narrow to envision the breadth of curriculum necessary for a dynamic United States," charges a Pennsylvania schoolman.

A Virginia superintendent said that "proper research for curriculum building is too expensive for small communities."

Many of the minority group believe that the mobility of the nation's population is a factor in setting up programs of instruction. "Although we need constant revision in the curriculum, it must become more and more uniform," stated an offical from Mississippi. "Pupil adjustment to new schools and communities is a big problem. Pupils should not be made to feel that they are moving to a foreign country every time they change schools."

A Colorado schoolman's comment:
"Our aim in education is to prepare
children to make their own living
and contribute to our society. Each
community is not a foreign thing,
only a part of our great country. Why
shouldn't our educational system be
based on state and national principles
since we assume our students will
be Americans all their lives?"

OPINION POLL FINDINGS:

Should responsibility for determining the content of the curriculum rest principally with the local school board and professional staff (as opposed to state, regional and national interests and forces)?

Yes. .74% No . .25% No opinion . . 1%

Based on a 4 per cent proportional sampling of 16,000 school administrators in continental United States, this survey brought a 43 per cent response.



"The art and science of school administration is influenced by an inexorable body of folklore and folkways, unwritten laws, admonitions and customs which seem to be interpreted by pixies, gremlins, brownies and poltergeists."

How To Separate Folklore From Administration

FREDERICK 'CHALK DUST' MOFFITT

F ROM historical times, the month just past, April, with its changeable moods, it's sudden storms and infrequent calms, has been filled with tricks, pranks and unexpected developments. By a curious coincidence, the pedagogical cycle during April usually is characterized by contract negotiations, teacher perambulations, loss of basketball championships, final dissolution of boilers, buildings and budgets, and similar happenings. On the first of April, the little kiddies, their parents, and the boards of education are wont to indulge in innocent fun by playfully mixing the pedagogical sugar with salt and removing tires from the school bus until the superintendent is not at all sure why he ever bothered to get out of bed in the first place. In celebration of this happy and carefree month, the author has collected some unique research with the hope of alleviating the rheums and rumors that affect the blood and temperature of a school administrator in

SCHOOL SUPERINTENDENTS bump along their merry way, clobbering and getting clobbered, on the theory that success or failure in schoolmastery is determined largely by three prime factors: (1) the incidence and juxtaposition of the moon and the tides; (2) the whims, whimsies and whimpers of Mrs. Busty, and (3) their own ability to win basketball championships with ever increasing regularity. It is not generally realized that in addition to these three great controlling factors, the art and science of school administration is influenced by an inexorable body of folklore and folkways, unwritten laws, admonitions and customs which seem to be interpreted by pixies, gremlins, brownies and poltergeists.

In order to be an ongoing school superintendent there are, to be sure, certain fundamental laws that every young administrator must learn or else he will perish. These laws are part of the common heritage that are warp and woof of the educational existence.

In abbreviated form, the fundamental laws of pedagogy might be summarized thus: A school administrator shall not smoke, dance, speed, swear, chase, bicker, play poker, increase the budget, or otherwise disport himself in unseemly fashion. In general, these minor restrictions, many of which are more forcibly spelled out in local ordinances, have become part of pedagogical tradition handed down from time immemorial and executed by the school patrons when they are not otherwise happily engaged in executing the superintendent himself.

In addition to these basic laws, however, there are many other more elusive and paradoxical commandments that govern school administration. Like all such treasured secrets, they are difficult to get hold of. If these laws could be collected and their operation studied and publicized, there might be an occasional opportunity to repeal some of them.

In an effort to collect and disseminate these unwritten laws, the author emitted a questionnaire with somewhat paradoxical results. More than half of the respondents to the questionnaire denied knowledge of any unwritten school laws outside the regulations of their state education departments, which they candidly admitted they did not regard seriously nor did they intend to do so unless caught in a litigation. Several irritated school superintendents, presumably driven insane by the plethora of opinionnaire on thisa and thata, mailed postage collect the minutes of their school board meetings, with the frank confession that they were happy to get rid of them. Examination of these records revealed a situation that has long been recognized by school administrators, *i.e.* that unwritten laws are seldom written.

In order to process this confused confusion, all of these data were fed to a processing machine, which was borrowed for the occasion from the nearest state education office. The machine should have been conditioned to pedagogical patter but was not, and it soon began to show symptoms of nervous prostration. Eventually, however, the unwritten laws of school superintendency were finalized and translated into English; and they are here published for the first time.

The machine reveals that all laws. warnings and admonitions to a school administrator fall into three distinct categories: (1) folklore based on the precepts and wisdom distilled from the experiences of past generations of philosophers, pedagogues and soothsayers; (2) more recent laws governing school administration that completely refute the folklore (e.g. the study of science varies in direct proportion to the ambulations of sputniks), and (3) the laws governing special facets of school administration not generally considered important enough to be included in preservice training. These latter play an important part of on-the-job administrative processes because they vitally affect such esoteric extracurricular activities as public relations, containment of parent-teacher associations and advisory committees, the management of school boards, and the ability to cuddle a teacup without slopping it

Let us examine the three categories in more detail:

Folklore in School Administration. It is not surprising that educational administration, which, from time to time to time to time, deals with child development, the learning processes, supervision, the pursuit of excellence, psychiatry, psychology, sociology, boy scouts, cookie sales, the farm problem, international good will, and the kitchen sink, is greatly influenced by folklore and folkways.

After all, the advent of schoolmastery is less than 100 years old, and the professionalization thereof is a tradition which, with a jolt from the American Association of School Administrators, will start next September or even later. We must remember that 100 years ago the practice of medicine was largely in the hands of barbers and midwives, and the science of rocketry was practiced only on the Fourth of July, so why should education, which is a notoriously slow and difficult process, get so fidgety all of a sudden?

The data processing machine used in this research declares categorically that the business of building curriculums or administering schools by folklore is a dangerous process. The machine draws even more startling conclusions when it points out that even the more recent folklore should be suspected. "For a five-hour school day is no longer a five-hour school day," the machine declares, "nor is the school year confined to 180 days, as was originally determined by sociological customs long since outlawed by sputniks and beatniks." There is other evidence that this is true. "Only change is permanent," shout the modern school desks as, unlike their predecessors, they march around the room like a maneuvering school band at half-time during the football game.

"Only permanence changes" cry the maps on the wall as they alter their complexions faster than the disgruntled chameleon in the laboratory aquarium. "Change always changes," asserts the schoolmaster as he swaps jobs only to discover that Mrs. Busty has moved simultaneously and has already joined several canasta choruses in the new community. These are hard sayings, my masters, but wise is the school superintendent who recognizes that in school administration the law of change has replaced the folklore of yesterday.

Replacing Folklore With Reality. The paradoxes, confusions and contradictions of folklore are the probable reasons that the data processing machine became discouraged at this point in our investigation and began to develop the same type of tummy ulcers which are common alike to school superintendents and duplicating machines.

"If it is not possible to administer a school by folklore, to what authority can we turn for guidance?" asks the bewildered administrator.

Fortunately, a great body of admonition is at hand. By trial and error, (Continued on Page 150) Three A.A.S.A.
regional conventions
interpret international
role of education
and

herald superintendents as world statesmen

LEO E. BUEHRING
and
JAMES BETCHKAL

PHILADELPHIA. — The third and final 1961 regional conference of the American Association of School Administrators had the largest attendance. Representation at the local meetings, held here March 25 through 28, was from 18 eastern and southeastern states, the possessions, and various foreign countries.

Registration at Philadelphia was 9000, or double the San Francisco total of 4500; it compared with the 6500 who signed the records at St. Louis. Over-all attendance was estimated at 10,500, compared with 8000 at St. Louis and 5000 at the bay city. The combined registration for the three convention cities was 20,000, and the combined estimated attendance, 23,500.

World Theme. The international roll of education received emphasis in all three convention cities. It served as the common denominator which linked the discussions.

At Philadelphia, specifically, these declarations were highlighted:

Community school problems are not created mainly in the community. They originate also in the county, the state, the nation, and the world. If this be so then we must look beyond the community for the solution of the problems of education.

Other thoughts:

School districts are becoming increasingly interdependent. None today can function as an island. American public schools are a source of mutuality with other peoples of the world. There is an increasing awareness that our schools can and must help shape the future of the world. Whether they wish it or not, America's educators have become world statesmen. The sense of urgency and immediacy is gaining momentum daily. Administrators must act now to assure that their schools approach more nearly their potential in helping shape the minds of men.

As at the two previous work conferences, general sessions were marked by speaker-analyst teams that explored disciplines with direct and indirect bearing on education: international economic relations, military horizons in the missile age, the "new" politics, and social class and caste systems. More than 120 section meetings and discussion groups explored just about every critical issue facing the American school administrator today, both domestic and foreign.

As before, members visited about 100 architectural displays and the vast array of educational exhibits, viewed an education film festival, attended dinners and open houses of educational institutions, joined in meetings of allied organizations, and breakfasted with others from their state and regions. They enjoyed the high caliber musical entertainment, including the "World of Music" sponsored by the Associated Exhibitors of the N.E.A. on the closing evening.

Ballot Boxes. When the voting at all three of the work conferences had been completed, this was the result: all 24 resolutions, two amendments to the A.A.S.A. constitution, and two amendments to the by-laws had carried. The Yes votes made up more than 90 per cent of the ballots cast. (See Page 63 for analysis of the resolutions.)

Future Meetings. In keeping with tradition, the A.A.S.A. will return to Atlantic City for general convention sessions during the next two years: 1962, February 17 through 21; 1963, February 16 through 20. In 1964 the regional lineup will see Cleveland substituted for Philadelphia. Meeting dates in 1964 will be:

San Francisco, February 22 through 25; St. Louis, March 7 through 10, and Cleveland, April 4 through 7.

Four Goals of New A.A.S.A. President. "The challenges to education must be considered within the framework of the great ideological conflict that rages in the world. The conflict is essentially a battle for the minds of men. This is the stock in trade of schoolmen. As our society has perceived the true nature of the conflict, educators have been thrust to the front in our national effort."

With these words, Benjamin C. Willis, Chicago's general superintendent and "the nation's best known school administrator," greeted school superintendents as he accepted the A.A.S.A. presidential gavel for the coming year. Dr. Willis legally had been president for 13 days, but until the close of the Philadelphia regional had been "the silent voice" of the convention.

Four goals were held up before the membership by the new president as he spoke of 1961-62 as "the year for leadership for every member of this association":

(1) achieving a unity of high purpose in working together toward the common goals; (2) developing a "metropolitan relationship" between cities and their adjoining suburbs; (3) discovering ways to finance the educational program more adequately, and (4) contributing to the further professionalization of the superintendency. The latter, he suggested, should be achieved at the state association level by the meeting of local university departments of education and superintendents to discuss the training and apprenticeship of young men for the superintendency and providing workshops and seminars for superintendents.

Liberally Conservative. Urgency was the underlying tone of the address by Sen. Gale W. McGee of Wyoming to superintendents attending a general session on Sunday morning. Time is running out for America, warned the Senator, who proclaimed that our nation "now has a fleeting chance to channel the forces of history and to shape the destiny of the world." But it will take giant steps—especially by American educators—to resolve our "national philosophy" and face up to the reality of the "sweeping changes now engulfing the world," said Senator McGee.

As to "resolving our national philosophy," the Senator said this: There are places and times in history for both liberals and conservatives. ("It was the liberals who wrote the Declaration of Independence. If we'd waited for the conservatives to do it, we might never have gained our independence from England. But remember that it was the conservatives who drafted the Constitution. If we had left it up to the liberals, we might never have consolidated gains in winning independence.")

The Good Society. After Stephen K. Bailey (see page 87) had defined the "new politics" as the age of enlightenment, "based upon such premises as equality of opportunity, human rights, and the rule of law," he set as its goal the "good society." The professor of political science at Maxwell Graduate School of Citizenship and Public Affairs, Syracuse University, saw three obstacles to the goal: (1) a threat of nuclear war; (2) a threat of blight from urbanization, and (3) a threat of overemphasis on materialism.

Analyst James E. Allen Jr., New York state commissioner of education, attempted to show how education might work to overcome these obstacles. To be effective in promoting the "good society" the educational process, according to Dr. Allen, must educate citizens "who value the lasting satisfactions of life above materialism; citizens who look upon themselves as citizens of the world."

Dr. Allen stressed that schools must recognize that "our very survival depends on their success in developing a sense of mutuality with other peoples of the world." Schools, he said, must

NAVAL CHIEF Arleigh Burke discusses submarines and missiles with his teacher of 30 years before, Warren L. McCabe. Both men were honored with Golden Key Awards presented under the sponsorship of seven national educational associations.



produce Americans who are "sufficiently and politically aware to give their support to a new politics geared for our years as a nation."

Polaris Missile Sponsor. Cited at the second general session was Arleigh A. Burke, chief of U.S. naval operations, Washington, D.C., and one of his former teachers, Warren L. McCabe, now administrative dean of the college, Polytechnic Institute of Brooklyn. The

honors came in the form of the sixth annual Golden Key Awards presented under the sponsorship of seven national educational organizations. The presentations were made by Don E. Matthews of Dallas, president of the National School Public Relations Association.

Admiral Burke was told: "Through your diligence and dedication as one of the country's military leaders, you have contributed immeasurably to the security and protection of our people now and in future generations." To Dean McCabe the citation said: "Your insistence on high standards for both your own work and that of your students has been an inspiration to them, and an encouragement to contribute their best to society."

Figuring largely in Admiral Burke's selection by the Golden Key Awards Council was his responsibility for the development of the Polaris missile. As the superior officer of Rear Admiral William F. Raborn Jr., in charge of the project, he saw the first atomic submarine equipped with solid fuel missiles put into operation by the navy three years ahead of schedule.

Dean McCabe was in turn selected by Admiral Burke "as the teacher who had decisively influenced his career" — in 1930-31, when Burke as a lieutenant commander was attending classes at the University of Michigan, Ann Arbor, and McCabe was an assistant professor of chemical engineering there.

How Classrooms Help Win Battles. "Our future battles will be won in the classroom," Arleigh A. Burke said in his address after accepting the Golden Key Award. The U.S. naval operations chief explained that the real preparation for a military career still remains in the home, grammar schools, high schools, and colleges, and he added: "That is why we in the navy want the young men and women of America to stay in school, to complete their education, to graduate.

"The qualities of judgment and leadership that come from hard work, from the discipline of the classroom, and from diligent study of the humanities will be needed more than ever by the leaders of tomorrow's navy, in control of weapons systems of tremendous power and complexities," Admiral Burke declared. He emphasized "that is why the social sciences in many respects are more important than the physical sciences. . . . We must find men who will work not only for themselves but for their country."

To the schoolmen Chief Burke pointed out: "The young men who will defend our nation, the young men who will nold its future are now in your schools. I envy you the opportunity that is yours, the opportunity to determine the kind of nation that America will be a generation from now."

Mark of the Professional. "An occasional ship springing a leak is no excuse for scrapping the whole navy and its staff; the same applies to education," declared Frederick M. Raubinger, New Jersey state commissioner of education, Trenton. Dr. Raubinger was "analyzing" the address of Admiral Burke and agreed on most points.



AMERICAN IMAGE abroad was the subject of the panel shown above. Standing (I. to r.): A. John Holden Jr., chairman; George V. Allen, speaker; Oliver J. Caldwell and Willard E. Givens. Seated (I. to r.): William T. Logan Jr. and Paul H. Kinsel.

INFORMATION PLEASE seemed to be doing a rushing business as the Philadelphia visitors line up for registration at their respective windows: superintendents, board members, exhibitors, ladies, other guests. Ballot boxes also were located here.



Pointing to the emphasis placed in his discourse by the Golden Key Awards winner on "doing the job right," Commissioner Raubinger stated that the pursuit of excellence through added hard work (along with a sense of purpose) is the mark of the true professional in any walk of life, be he navy chief or educator.

The New Jersey schoolman stressed that a high premium is placed these days on creative teaching. He said that economic and social principles could be spread only by persuasion, not by force.

"Every secondary school graduate should have an understanding of Communist beliefs and of those of Western society, compared objectively." He should be made to see that in our country it is the individual human being who is important, and that this philosophy can be helped only in our type of free society, Commissioner Raubinger said.

Inventory of Gaps. Today's man-onthe-street was in our schools a few short years ago. Why was he not prepared for the changes that had to come with the Marshall plan? Why does he still think of Africa as the land of the safari and the sphinxes? Why is it so difficult for him to explain why our American economic and political systems are so much better than those of other ideologies?

These were among the pointed questions asked by Sam M. Lambert, director of the N.E.A. research division, in his role as analyst of the address, "New Perspectives in America's Economic Relations," a repeat by Raymond Vernon of his St. Louis discourse. Dr. Lambert believes the answer is partly because teachers are inadequately prepared to teach social studies. He urged annual workshops to bring teachers up to date.

To the missile, dollar and philosophy gaps Dr. Lambert added several others, among them the enrollment gap. Only 60 per cent of fifth grade graduates complete high school, he reported. Since unemployment among the nonhigh graduates is proportionately twice that of secondary school graduates, the former are the more disgruntled and disillusioned, Dr. Lambert stated. Thus, in the long run it should be cheaper to educate them for a useful life by keeping them in school and adjusting the curriculum to their vocational needs.

Quality on the Firing Line. After summing up the state of the superintendency (too many children, too few teachers, not enough money, shortage of classrooms, too many tasks for the superintendent to perform in too little time), Robert D. Baldwin, professor of educational administration at West Virginia University, went on to describe his ideas of what ought to constitute a "quality" program for superintendents on the firing line.

Field services should constitute the warp and woof of such a quality program, said Dr. Baldwin, a good example being an internship program.

More school surveys are another quality element recommended by Dr. Baldwin. The local professional staff should bear most of the burden for planning and directing the survey, he said.

Dr. Baldwin's concluding suggestion: Summer administrative conferences and workshops are a great help. They should be "streamlined, clean-cut, stripped of nonessentials, but 'all there.'"

Catskills Revisited. With or without a Conant blessing, small school districts with fewer than 200 high school students will continue to exist all over this country—and for a good many years to come. So predicted Edwin R. Tillapaugh, supervising principal at Central School in Downsville, N.Y.

However, these small schools need not suffer from curricular malnutrition, said Mr. Tillapaugh, who brought superintendents up to date on what's been happening with the Catskill Mountain project for small schools (The Nations Schools, April-May 1959). While admitting the "impossibility" of this project's providing "a program equal to that of the large school system," Mr. Tillapaugh said that the project has made it possible for small schools in his area to offer a "much richer curriculum."

The Catskill project, which pools teachers and resources of numerous small districts, is scheduled to terminate this summer when its supporting grant from the Ford Foundation expires. Even so, reported Mr. Tillapaugh. the success of the project has warranted the continuation of many of its areas. They now will be supported by budget appropriations at the local level.

Social Classes and Castes. Social class is determined by the individual's own ideas of values, W. Lloyd Warner said in speaking on "Social Class and Personality Development." The professor of social research at Michigan State University, Lansing, was appearing "as a reporter on the social structure of America."

Studies reported by Dr. Warner indicate the following: School board members are predominantly upper and upper-middle class. Teachers are typically 94 per cent middle class. Students have been divided into 60 per cent, lower class; 30 per cent, lower-middle class, and only 10 per cent, upper-middle and upper class. The latter indicates, Prof. Warner stated, that well over half of the school children are in direct relation with teachers whose values and ideas differ from their own.

We no longer have a fixed society, Dr. Warner declared. Since the 1920's (Continued on Page 174)



Sen. Gale McGee



Supt. Allen H. Wetter



Researcher Sam M. Lambert



Economist Raymond Vernon

MARGARET MEAD, associate curator of ethnology, American Museum of Natural History, New York City (right), spoke about "American Culture in the Sixties" at the A.A.S.A. meeting in St. Louis.

HENRY H. HILL, president, George Peabody College for Teachers, Nashville, Tenn. (facing page, left photo), gave an "analysis" of Miss Mead's speech.

RECIPIENT of the 1961 American Education Award
was William C. Menninger, president,
Menninger Foundation, Topeka, Kan. (at left
in photo at far right). The award was presented
by Kemp Huber (at right), president
of the Associated Exhibitors of the N.E.A.



Photos by Buzz Taylor, St. Louis

Midwest Administrators' Meeting

MILDRED WHITCOMB

and

LEO E. BUEHRING

St. Louis. — The one unmistakable message from the regional convention of the American Association of School Administrators held here March 11 to 14 was this:

The old mid-American isolationism is dead! Long live the internationalist mid-America!

Ricocheting off the podium morning, noon and night were exploding words and ideas, all calculated to fire the listeners' minds with the nation's need for friendly living in a world become interdependent.

The mid-continent's new vulnerability to enemy attack, the often violent eruption of new nations inspired by our own revolutionary origins, the illiteracy of half the world's peoples, the fun-house distortion of the American image abroad, Communist strides in technical education and propaganda — the continued build-up of these facts served to touch off the delegates' desire for greater international understanding.

All the usual talk about curriculum, money and buildings — and it was sensible, often high-minded talk — suddenly seemed less urgent than each school administrator's own effort to make

American children and American adults internationally minded.

Some 6500 school folk from 20 states, plus a thousand or so exhibitor personnel, carried on resolutely through thundershowers, threats of tornado, elevator breakdowns, and long-distance runs to remote meeting rooms. Many of the section meetings and discussion groups were sprightly and crowded, although the generally poor attendance at evening meetings was not flattering to speakers.

Even the Associated Exhibitors' popconcert on the closing evening had an international flavor. Earlier at this affair, Dr. William C. Menninger again accepted the American Education Award for 1961, and Stanley C. Campbell of Stoughton, Wis., and Walter J. Ziegler of San Gabriel, Calif., accepted their graduate scholarships from the hand of Kemp Huber, Associated Exhibitors' president.

The Administration's federal aid bill kept coming in for praise, and both the N.E.A. board and Phi Delta Kappa issued statements in St. Louis in support of the measure. Voting on the A.A.S.A. resolutions, begun in San Francisco, continued in St. Louis, and,





Also Has Distinctive International Flavor

at the close of the Philadelphia sessions, the results were officially released. They are analyzed on page 63.

Ninety Degree Turn. Superintendents, so adept at reorienting teachers, had some dizzy moments of their own on Sunday as President Virgil M. Hancher of the State University of Iowa spun them around 90 degrees and then called a halt.

When they got their bearings, they realized that from this new angle there was no turning back, neither for them nor for other Middle Westerners.

"In our posture for defense," President Hancher declared, "we have moved through an angle of approximately 90 degrees. No longer are our East and West coasts the only frontiers of attack. The attack may come from the north beyond the Pole — or even from the south, if Latin America should ever go the way of Cuba. We need to see with open eyes, to explore new attitudes, to cultivate new approaches to new problems." He continued:

"The great division in the world is no longer between the East and the West," he maintained. "It is between the North and the South. For the most part the 'have' nations are in the northern temperature zone. The 'have-nots' are to the south.

"The U.S.S.R., having moved from an agrarian to an industrial society in less than 40 years, offers an attractive model to nations that believe they can't afford the slow steps taken by the Western industrial states."

These slow steps need not be repeated, the Iowa president said. Congo tribes and other have-nots can telescope the advance from wood fire to nuclear power. But — not without the financial and technical assistance of the wealthier nations! And — not without hard and exacting mental and physical labor of their own, he concluded.

Image or Caricature? A man who was in Moscow when the U-2 story broke, in Korea when they rioted against Syngman Rhee's rule, in Chile during the disastrous earthquakes, in Chana during the African-Asian conference, was in St. Louis on the day the A.A.S.A. talked about the American image abroad.

In fact this man, Gordon I. Swanson, associate professor of agricultural educa-

tion at the University of Minnesota, did much of the talking for that program. His world travels were chiefly a result of his being program director of UNESCO.

Dr. Swanson's image must have been good, but our own would be better, as individual travelers abroad, if we would just be our own true selves instead of trying to create an image of America. The latter is the professor's view.

In many parts of the world the American image is not image but caricature, and Dr. Swanson thinks education provides the greatest temptation to caricature. The Rickovers and the Bestors, and the authors of "Teahouse of the August Moon," "The Ugly American," and "Americans Abroad" do a devastating job in destroying our real image, the UNESCO traveler said.

Nor do our politicians and diplomats accord education its true importance, a vocal group of panelists and others added. To one questioner, who feared that the Peace Corps might be a "colossal flop," Dr. Swanson commented only that he hoped the selection board would eliminate both "do-gooders" and "honeymooners."

(Cont. on Next Page)



Photo by Buzz Taylor, St. Louis

Things They Said in St. Louis

'Men who may go to the moon need wider ethics than men who have lived all their lives beneath the same trees in some small river valley.'

- Margaret Mead

'Is an educational system basically designed to make an international population American suitable for a world in which our very survival may rest upon our capacity to make an American population international?'

— Stephen K. Balley

'Mathematics is an international language quite as indispensable for an understanding of the modern world as is the mastery of any modern living language.'

- Virgil M. Hancher

'Perhaps President Kennedy's Peace Corps will offer a start toward getting to know and understand other nations better. A challenge to difficulty and high endeavor will always arouse the interest of young people, far more indeed than the lure of personal security. It, once seemingly attained, appears to cloy.'

- Henry H. Hill

GROUND RULES were agreed upon previous to launching the program on "The American Image Abroad." Participants (shown from 1. to r.) were: Frank L. Schlagle, superintendent, Kansas City, Kansas; Lauren L. Schwisow, superintendent and president, Junior College, Scottsbluff, Neb.; Frank W. Douma, superintendent, Ottumwa, Iowa; Robert E. Mc-Adoo, associate professor of education, Kansas State Teachers College. Emporia; E. H. Mellon, superintendent, School District No. 4, Champaign, III.; Gordon I. Swanson, associate professor of agricultural education, University of Minnesota, and Martin Essex, superintendent, Akron public schools, Akron, Ohio.

What the new underdeveloped nations need, it was agreed, are people who can teach freedom without taking it away.

View From New Zealand. America's No. 1 educational problem is the simple fact that half the world is illiterate.

This is the view of a New Zealand educator, his country's current ambassador to France, C. E. Beeby. He is one of a team of four foreign statesmen traveling the regional convention circuit and platform hopping in between.

"The present sense of urgency comes from the vision of mothers in Asia and mothers in Africa that their children could have a chance for a little higher standard of living than they and their forebears had. There may be loftier motives for education but none stronger.

"In these new nations the demand for educating an elite to run the government, the schools, and industry is coupled with the demand for simultaneous education of the masses. This is a totally new problem among nations."

Mr. Beeby asserted that these new nations can't do it alone. The other countries — the other democracies — must help. They must provide: (1) vastly more money than at present; (2) personnel — from Peace Corps to specialist; (3) new methods to transfer highly developed systems of teaching to an extremely simple system; (4) understanding of the cultures of other people.

European Integration? Hans Reimers of Hamburg, Germany, predicted that

the next decade will decide whether there is a common unity in European culture.

The younger generation, Mr. Reimers said, is eager to push forward toward the integration of the Western European states. Sixteen ministers of education of the countries of Western Europe will meet this year to plan European education for the year 2000.

European educators, and particularly those of Western Germany, where a thousand refugees a day still pour in, have to know well what the Communist doctrines are. Those closest to the Iron Curtain see the greatest need for action in their schools, Mr. Reimers declared. He thinks that German schools have succeeded in erasing the darkest age in German history and "are now establishing in the hearts of the children the true image of man."

Suspicious of West. The Arabic speaking peoples are more suspicious of Westerners offering educational assistance than they are of Communist assistance, declared Abdul Majid Abbass, an Iranian now teaching at American University, Washington, D.C.

This is chiefly a legacy of colonialism, as all the Middle Eastern countries were once under some sort of foreign rule. The young nationalists fear that with aid will come also another kind of concealed foreign control.

"It is only since the rise of communism that the West has discovered the Middle East, these young nationalists hold," Mr. Abbass explained. "Moreover, Westerners have never appreciated the proud and venerable heritage of the Middle Easterner.

"Communism has a moral appeal," he continued. "Its leaders have called for sacrifices not only on material grounds but on a higher moral level. Westerners try to tell the Middle Easterners that they had better cooperate with them or otherwise they will be under Communist control. This is not a good argument, as it was not Communist control they were once under."

What the Middle East really needs is a new kind of education for a new environment, Mr. Abbass said. The traditional order and social control of custom have broken down, and this has led to excesses. It needs an education in which the new elements of technology are blended with the national culture.

Board Members' Homework. When the A.A.S.A. asks: "What can the school board expect from the superintendent of schools?" it turns not to the board but to a superintendent.

At St. Louis it turned to S. P. Marland Jr. of Winnetka, Ill., a forehanded man with a board.

Take the agenda for a board meeting. Supt. Marland prepares comprehensive agenda well before each meeting. He mails them out so that board members can do their homework for several hours or evenings in advance.

Each item is clearly stated. Pros and cons are enumerated, bolstered by research findings up to 20 pages per item or a sheaf of reprints from professional magazines. In addition, Supt. Marland sums up the arguments — his own, his staff's, and the experts'. That isn't all. He phrases a recommendation on each item. The board may not always accept his version, but it is a great timesaver for the board.

"They get awfully fed up with being board members after midnight," Dr. Marland said. "In fact, after midnight they don't always act wisely."

None of the analysts or panelists could shake Dr. Marland from his position that the superintendent is the chief administrator of the board, as well as its chief professional adviser.

Local Control a Myth? "Local control? Save us from it!" cried Harlan L. Hagman, dean of administration at Wayne State University, Detroit.

According to Dean Hagman, local control of education has probably been a myth more than an actuality at any time in the history of our country. It has been perpetuated with considerable heat and with probably no real appreciation of what the local control consisted of or what good might be secured through and for it.

"We cannot afford to ignore the real in favor of a delusion. The control of public education should be in the hands of all the people, the state, and the nation. Anything less in a critical age could be disaster," Dean Hagman con-

Metropolitan Moves. Large cities are growing larger, and if a substantial proportion of the nation's children and youth are to receive quality education they will have to get it in big city schools.

Prof. Russell T. Gregg of the University of Wisconsin thus led an attack on centralization, which he calls the bane of metropolitan school systems. He wants the principals and the teachers again to be the key actors in the educational scene. He wants the urban citizen brought back into close relationship with his school. The whole trend in the last 25 years has been to more centralization rather than less, he charged. This trend must be reversed, in his opinion. He applauded our two largest cities, New York and Chicago, for their leadership in reversing this trend.

Came then James H. Smith, deputy superintendent of Chicago schools, to explain the decentralizing of administrative functions in Chicago. It now has 20 district superintendents responsible for a district comparable to that of a small city, with about 20 elementary schools and two or three high schools. Some functions, such as purchasing and teacher certification, are kept centralized.

New Commissioner's Greeting. Not listed on the program, but present at the Saturday evening session, was Sterling M. McMurrin, U.S. Commissioner of Education, who was introduced as "a bright new star on the educational horizon."

Said Dr. McMurrin in his brief greeting:

"Education is the greatest task our nation faces today. What happens in education will determine eventually the quality of our society and our culture. Never before has our responsibility been so great and it promises to become greater. It is a matter of high commendation when people like you have a high sense of dedication to the preservation of our culture."

Dr. McMurrin stressed the necessity in a democratic society of orienting education to the needs of the individual. This is a difficult task to achieve, but we must do it and we must do it better than in the past, he said. "The nation needs a far greater commitment to education than it has ever achieved — a commitment of all our resources in every sense of that term; we can no longer be wasteful of our brainpower."

Controversy Aired. "Developing Educational Sensitivity to Hot Issues" was the subject of a panel discussion moderated by Arthur H. Rice, editor of

Comparative cultures, economics and

the new politics were discussed by general session speakers

and interpreted by "analysts."

The Nation's Schools. Setting the stage for the discussion by a five-member panel was Lindley J. Stiles, dean, school of education, University of Wisconsin, Madison.

"A nation that avoids, rather than faces, controversial issues is headed toward disaster. Similarly, a school system that denies its students appropriate opportunity to study the critical issues confronted by the society it serves becomes impotent and obsolete," Dr. Stiles declared.

Among the critical problems of worldwide significance he listed are the following: (1) the surge of new underdeveloped nations; (2) world population increase, threatening to overflow space for living; (3) an age of perpetual newness wherein new inventions, new concepts, and competing values provide man with a challenge of continuous change (this situation puts man on edge, makes him want to return to the comforts of yesterday, but he will not be able to do so); (4) the problem of making available to men everywhere the knowledge and services that would bring happiness and high standards of living; (5) development of international trade, and (6) establishment of mutual good will and confidence between old and new free peoples.

International issues such as the foregoing require the careful cultivation of educational sensitivity, Dr. Stiles explained. For this reason the study of controversial issues should become an accepted function of the school program. Also, international perspective must be developed in the study of all subject fields, and priority must be given to world problems, particularly in the social sciences.

Cultural. In a society such as ours, said Anthropologist Margaret Mead, we are faced constantly by new situations and are trying consciously to cope with them. Among such critical questions are: Are all people equally educable, and if they are so at birth do they remain so throughout life? If two persons from two different cultures each learn new things as easily as the other, is this because of some difference in the way they mature or because they have matured in a different kind of culture?

Dr. Mead inquired whether we in the United States are doing anything between birth and age six, or between six and the teens, that keeps our children from some kind of learning (such as foreign languages), some skill of the body or of the mind.

In our country, according to Dr. Mead: We depend more than any other country on special kinds of skills, those of understanding what goes with the machine processes, with knowledge of mathematics, and with an expectation of order in the world. An important consideration is whether such abilities can be cultivated, whether some of them are innate in only some individuals, and whether there are any real differences between boys and girls. By comparing the achievements of different cultures, Dr. Mead said, we can get first answers to these questions.

Following Dr. Mead as analyst was Henry H. Hill, president of George Peabody College for Teachers, Nashville. Dr. Hill reported that the expected cost of sending the first "ship" to the moon would be \$35 billion, or more than our federal government spends for all Cold War and defense in one year. He hoped that one or two of these billions of dollars might be made available for education, since he was convinced that such an investment would result in far-reaching benefits to our country's national welfare.

Clarification of Economic Aims. "The speed-up in communication and travel has given a quality of impermanence to our institutions and attitudes that has no historical parallel," Raymond Vernon told the administrators. The professor of international trade and investment at Harvard University also said our unwillingness to trade with the Soviets had resulted in stepping up production on their part.

Regarding the balance of payment position, Economist Vernon predicted that the dollar shortage will return. He hoped that this country would take steps to clarify its economic aims and was certain that citizens during the Sixties would rise to meet the world economic challenge.

T. M. Stinnett was the analyst for the Vernon presentation. Dr. Stinnett (who is executive secretary for professional development and welfare for the N.E.A.) discussed the relation of industry to education. Until now, said he, we often have regarded the educational activities of industry as an invasion of policy making. Dr. Stinnett suggested educators use the facilities of industry. But he also urged the creation of a device for evaluating industry's contributions to education in the same manner that the American Medical Association evaluates the creations of the pharmaceutical industry, such as the wonder drugs, before they are put to general use.

Essential Ingredient. At the opening session, Robert S. Gilchrist, superintendent of schools, University City, Mo., spoke on, "Tools for Education in the Sixties." Dr. Gilchrist pointed out that 33 hours of convention time had been set aside in the program for the viewing of educational aids, and that this arrangement offered a genuine opportunity to administrators. He mentioned a number of yardsticks that superintendents might apply in planning the viewing of exhibits, the major one being: Does the exhibit have promise of enhancing the instructional program of

boys and girls? Any display that suggests methods for bringing into play all the senses of the pupils in the learning process more fully (not only their ears) was said to be deserving of particular attention.

At the closing general session, on Tuesday evening, Kemp Huber, president of the Associated Exhibitors of the N.E.A., presented his organization's annual awards, as he had at San Francisco meetings: the American Education Award, and two S. D. Shankland memorial scholarships for graduate study in school administration.

The New Politics. "Is a school system that was designed to make pupils look to the nation-state as their terminal loyalty adequate for today?"

No, said Stephen K. Bailey, professor of political science, Maxwell Graduate School of Citizenship, Syracuse University. He spoke before a general session on "the new politics."

"In the modern age there is no way to control our own destiny except by making our weight felt in distant places," he asserted.

"Until we in education take this to heart in our own enterprises, can we fashion curricular changes that will make our students aware of this critical proposition of interdependent, urbanized man in the Twentieth Century?"

Prof. Bailey also struck out at the anti-tax and anti-government mentality. "The consumer oriented technology of today and tomorrow can't possibly sustain itself without the skills that only a more heavily supported educational system can provide," he declared.

Pointed Specialists. As analyst of the Bailey address, Francis S. Chase stated that Prof. Bailey had "pretty well worked the education side of the street by sketching in general terms the implications for education of the array of problems confronting it." Dr. Chase, who is dean of the graduate school of the University of Chicago, then added: "But I cannot resist chiding him for being less specific about the political arrangements and processes than he was about the educational implications." He expressed disappointment that Dr. Bailey had not propounded a strategy for dealing with these threats through political theory, structure and action."

"We are very stupid," said Dean Chase, "if we think that the schools can shoulder the burdens of society. Teachers and school administrators can do their job well only if they are supported by the thinking of sc! olarly specialists, given the tools with which to work, and freed from restrictions and demands inimical to education."

Then Dr. Chase made this demand: "The social scientists must give us more

help in analyzing problems and in indicating the lines along which solutions lie. Political arrangements must be devised to give the school greater autonomy, more ample resources, and greater freedom from arbitrary interference by politicians and other meddlers. Heavyhanded bureaucratic controls, when imposed by local administraive hierarchies, are as onerous as when imposed by state and federal bureaus," he said.

Business Up. Another discussion group concerned itself with the role, responsibilities, preparation, salary and other factors related to the school business administrator. The discussions of Charles W. Foster, executive secretary, and Frederick W. Hill, member of the board of directors of the Association of School Business Officials of the United States and Canada, were based on the association's recent publication, "The School Business Administrator."

Certification was discussed by speakers and members of the four-man panel with some difference of opinion. Members of the Texas A.S.B.O. were said to favor 100 per cent certification for the future, with a grandfather clause protecting the membership of all presently identified with the organization. Stressed was the fact that the organization must first set up quality standards and enforce these standards before the quality label of the group can be assigned to individual members. Standards for certification must also be clarified by present practitioners in the school business administration field.

Ten Principles and 200 Sardines. If there was ever a "felt need" for a better environment for teaching and learning, it was in Committee Room 3-D one afternoon. There, with pinned elbows and wedged knees, sat 200 schoolmen—for all the world like imported sardines packed in their own oil. Their collective mind was fixed, appropriately enough, on providing more malleable space for the processes of teaching and learning.

The two teachers also had crude facilities. Dr. Harold D. Drummond, chairman of elementary education at the University of New Mexico, rose from a communal bench to enunciate his 10 princi-

And Architect William Brubaker of Perkins & Will, Chicago, had to mount a folding chair to embellish the graphic material displayed on a screen by a highrise projector. He maintained his balance, he sketched, and he showed slides, maintaining a running commentary the while.

Here is Dr. Drummond's list of accepted principles that school architecture frequently violates (plus a few of his comments):

1. Each individual is unique. (Schools are often built as if a child could jump from 6 to 17 in one day.)

2. Development and growth are continuous. (In our school buildings the larger the learner the smaller the learning space.)

3. We learn what we live. (In 1961 we are still building elementary schools without a library.)

4. That which is learned, if not used, is still forgotten. (Youngsters need space to use what they are learning, more flexible space.)

5. There seem to be teachable moments. (If now is the time, the teacher needs supplies, equipment and books at hand, and this takes storage space in the room.)

6. Physical and emotional health is basic for effective living and learning. (Where are the restrooms for young children, the indoor play space with showers, the retreat for the distraught teacher?)

7. Learning and growth are stimulated both by security and adventure. (Children need more space than a locker in a hall. They need the security of the self-contained classroom, and don't you go rushing headlong into some scheme prompted by the Reader's Digest or an admiral or some foundation!)

8. Behavior is learned.

9. We learn several things at once. (As we learn skills, we learn cooperation, understanding and so forth.

10. We learn a great deal, and we learn it rather permanently, by example. (Teachers tend to be relaxed and understanding in a pleasant environment.)

Dr. Drummond concluded his list and his comments with a plea to superintendents not to compromise these principles in their building programs.

Taking the list, point by point, Architect Brubaker illustrated each principle with suggested floor plans and color photographs of completed structures, including elementary school libraries, play spaces, storage spaces, instructional materials centers, and a plan for a language laboratory with a visual component as well as an audio component.

It was a good program, the "sardines" all decided, as they separated themselves and found they still had all their bones, but an occasional elbow and knee was skinless. Several had taught, and many had learned in facilities full of violations to the 10 basic principles.

Our Own Underdeveloped. At the same time we are learning the names and reviewing the claims on our generosity to all the new nations, Dean Francis S. Chase of the graduate school of education, University of Chicago, has some exciting ideas of what we might be doing for our own underdeveloped

youngsters. He made these suggestions at St. Louis:

- 1. See to it that every child between 2 and 6, whether from the slums or the shacks of migrants, is read to regularly by someone who cares. Dr. Chase would recruit volunteers and set them loose with their story books at child care centers and nursery schools.
- Spread to all such children the attention a few cities are giving to primary grade children who come from those poor or broken homes that give little incentive to learning. Get federal aid to provide the specialized help needed.
- 3. Provide work experiences for adolescents who hate to study either through cooperative arrangements or through a modern CCC.
- 4. Make accessible to children and adults books and books and books other learning materials too to bait the fast learner and the slow, the romantic and the practical, the imaginative and unimaginative.
- 5. Take the same type of services to nations struggling with poverty, illiteracy and a high birth rate. Through international arrangements, translate reading materials into all tongues, recruit teachers to train other teachers, organize traveling teams to make a circuit of several villages.

Also, Dean Chase would have these things done immediately - in 1961.

K-3 Schools. Small children belong in small schools. Nobody argued against that statement in one discussion group, save on the basis of costs.

Laura Hooper, program coordinator for the Association of Childhood Education International, declared an enrollment of 300 to be the maximum for a K-3 school. No argument against small neighborhood schools outweighs the arguments for them, she contended.

"In such schools," Dr. Hooper declared, "it is humanly possible for the principal and teachers to know the children and their families, for the teachers to know one another, for teachers and parents to work together.

"It is possible for the community to be a part of the school or the school to become a vital part of the community. It is possible for children to cope with situations that are not too overwhelming. The mechanics of school housekeeping can be reduced to a minimum.

"Moreover, the entire school plant can be used to the best advantage for the education of children — not to reduce costs or to conserve space but to conserve children."

Dr. Mildred E. Sommers, director of

instruction, Jackson public schools, Jackson, Mich., a second speaker, concurred. She did add, however, that a close teacher-community relationship does not necessarily mean that the needs of the individual pupil will be met.

"The effectiveness of any school program, small or large," Dr. Sommers maintained, "depends on the teachers in that school. And when it comes to offering enrichment for the academically talented in the small school it may take more imagination and ingenuity, as the pupils are so few."

Thorny Issues. One or two votes in the House may determine the outcome of the Administration's federal aid to schools bill, Everett Keith, executive secretary of the Missouri State Teachers Association, told a section meeting.

"You have all read the papers and you know full well the thorny and explosive issues that revolve around integration, church and the U.S. Chamber of Commerce with its shopworn bugaboo of federal control."

This federal support bill can be passed this session if all who are interested in good schools become active and stay active, Mr. Keith contended. It could be many years before such a favorable climate again might exist, in his opinion.

Improving Teacher Morale. Practical suggestions to the administrator who wishes to improve teacher morale were cited by Prof. B. J. Chandler of Northwestern University. Based on his review of research reports and from other sources, the recommendations are seven:

- Delegate as much authority and responsibility as possible to staff members.
- 2. Implement Andrew W. Halpin's philosophy: (a) delineate clearly the relationship between yourself and members of the group; (b) establish well defined patterns of organization, channels of communication, and ways of getting the job done; (c) reflect friendship, respect, mutual trust, and warmth in relationships to members of the group.
- 3. Set aside some time each day to think, speculate, contemplate and even dream.
- 4. Don't take personally any negative reaction from teachers and other staff members. Often they are not reacting to you but have personal problems or frustrations.
- 5. Keep your eyes on the big picture and resist the "press of particulars" that continually crowd in on the busy administrator.
- 6. Constantly strive for a state of mind that is philosophically oriented,

Potpourri of discussion

topics ranges from

underdeveloped

youngsters to proper

decorum of the

superintendent's wife.

rather than thing or minutiae dominated.

7. Take full cognizance of the fact that you are yourself a person with many and sometimes opposite self-reactions. Be aware of yourself as an entity, and of other human beings as different persons. Think about your own behavior, examine your activities critically, and improve.

When the Girls Get Going — the going is good. As in Atlantic City last year so in St. Louis: There was a session in which the superintendents' wives could engage in friendly agreements and disagreements. Through some error in scheduling, the program on "The Superintendent's Wife" took place at the same time the only other program for women was going on, namely, "Lady, Be Fit."

This report is on the program, not of physical fitness, but of psychological fitness. Speakers and panelists were largely from Suburbia, but that did not necessarily put them in the same corner. In fact, the only real verbal tussle was between the wife of the superintendent of schools of Winnetka, Ill., and the wife of the principal of New Trier High in Winnetka, Ill.

Both Mrs. Sidney P. Marland of Winnetka and the other main speaker, Mrs. Lloyd S. Michael of Evanston, Ill., held that the superintendent's wife must keep her husband's position well in mind in all her dealings with community groups, keep away from controversial issues, and not become close friends with any of the teachers.

Mrs. William H. Cornog, the New Trier superintendent's wife, couldn't have disagreed more. "When, after six years, I stopped trying to be a superintendent's wife I became a better one," she said. "There is no mass mind; there is no mass opinion. Why should A.A.S.A. wives be so inhibited? The mayor's wife or the fire chief's wife doesn't feel she has to conform to a public picture."

Mrs. Marland also said that the superintendent's wife should dress attractively but not too smartly.

This is all nonsense, in the opinion of Mrs. Hubert Wheeler, wife of Missouri's state commissioner of education. "An artistic flair in the superintendent's wife is appreciated in this day and age. She can now be an individual. She may get criticism and she may get praise. But she should be a distraction for her husband. He needs something different from schools."

Here are some other gleanings:

"The superintendent's wife's first job is to feed her husband."

"You're wiser not to know too much about your husband's office or his plans. Then it's easy to play dumb."

"Social relationships with individual board members and their wives are not likely to cause trouble."

"If your husband spends most of his evenings away from home, let him. Otherwise he isn't contributing to community affairs."

"Tea party guests prefer sandwiches to cookies or cakes. But it takes longer to make 1200 sandwiches than 1200 cookies"

"The superintendent's wife should never play more than a supporting role. They give Oscars for supporting roles."

"When somebody tries to involve you in a controversial matter, say: 'That's an interesting point of view. I never heard it expressed quite that way.'"

"When some discontented faculty member starts sounding off to you, say: 'I promise you that your comment will never reach my husband's ears.'"

"Merely act as a reasonably intelligent normal woman doing what a reasonably intelligent normal woman does naturally."

Partnership. A publicly supported school of education is a partner in school improvement with elementary and secondary schools of the state, Dean Lindley J. Stiles of the University of Wisconsin School of Education told a group.

"Its contribution to the partnership is that of leadership through research. Its goal is to apply the brain power of the entire university faculty to the educational problems of the state."

Two Citations. At the second general session two practicing educators were cited by the association: Edward G. Stapleton and G. E. Watson.

The citation for Edward G. Stapleton, superintendent, Towson, Md., read in part: "For his quiet, intellectual vision; for his ability to stimulate creative efforts gently and perceptibly; for his leadership singularly free from domination; for his skill in achieving rapid progress with a grace of slow deliberation . . . the A.A.S.A. bestows upon him this award of excellence and distinction."

Similarly the citation for George E. Watson, Wisconsin State Superintendent of Public Instruction, Madison, read in part: "He has been a courageous defender of old and basic values; and at the same time he has seized upon and promoted with vigor and wisdom the new. . . . Thus his leadership became nationwide."

WENDELL GODWIN of Topeka, Kan. (left photo), presided at the third general session of the regional meeting in St. Louis. He is a member of the A.A.S.A. executive committee. . . . RECIPIENTS of the Associated Exhibitors' S. D. Shankland Memorial Scholarships for Graduate Study in School Administration were Walter J. Ziegler, superintendent, San Gabriel, Calif. (at left in center photo), and Stanley C. Campbell, former superintendent, Stoughton, Wis., and now doing graduate work at the University of Wisconsin, Madison. . . . FRANCIS S. CHASE, dean, graduate school of education, University of Chicago (right photo), spoke about "Priorities in Education for the 1960's" and "The New Politics: Analysis of Implications for Education."











BETTER ACOUSTICS

AT LONG last the sound barrier has been broken and school folk everywhere will rise up to acclaim their favorite educational magazine for the administration study on acoustics for the schoolroom. The publication of this material has been delayed too long inasmuch as the hush-hush policy advocated by school superintendents never has been very successful.

As a former superintendent who was driven from the classroom by clamor, clatter and confusion and whose broken eardrums are the result of reverberating walls and echoing corridors, the writer is a pitiful witness to the detrimental effect of noise on the mental and physical processes of children and teachers.

The school at Sugartown, where I first lost my hearing and sanity, was built before the days of pitted ceilings and absorbent walls, and the classrooms obviously were designed on the sound principle of the interior of a brass drum. When, in the privacy of my office, I whispered secret imprecations about the school board, the resulting sound waves shook the nerves of the kiddies on the third floor, although, at the time, this hardly seemed a sufficient excuse for the school board to fire me for "disloyalty and adding to the general confusion."

For the youths of Sugartown were as well behaved and quiet as could be expected. At the insistence of the faculty, they were constantly harried and shushed until they generally spoke in whispers. Even the visiting dogs and siblings were well mannered and seldom barked or bawled. But in spite of this restraint, the sound waves echoed the effect of a jet airplane crossing the Himalayas.

To the uninitiated it should be explained that a certain small amount of noise is bound to be generated when a thousand kids are gathered together to sing choruses, practice basketball, run printing presses, tootle trumpets, make birdhouses, gather at assemblies, and engage in the various projects that are part of the educational process; even a class in science can cause a temporary

disturbance by exploding rockets and tamping atom bombs.

Added to this normal disquietude are the outside demonstrations of mechanical hammerers and electric welders who invariably are sent by the city fathers to surround the schools on important occasions, such as examination days and similar retreats arranged by the school authorities.

Thus, as I sat in my office at Sugartown, great gobs of sound gradually drove me nuts. My letters became more bitter. They were answered amidst the corridor noises of wrathful parents and shuffling advisory committees. My speeches became incoherent. They were written to the tunes of Jingle Bells and Wagner's Ring Cycle.

My meditations were sabotaged by the distant splatter of basketballs. My supervision was nullified by pounding radiators and echoing projects. While I longed for the peace and quiet of the battlef-cld of Gettysburg, my board of education exaggerated the situation by comparing the school to a boiler explosion in a stone quarry.

There are still too many Sugartowns in existence. Whether this condition has been encouraged even to this day by the makers of headache powders and pacification pills or by the advocates for more education for auctioneers and TV pitchmen, I cannot say, but it is high time to do something about it.

The fact that the average classroom is built to the specifications of a tail gunner on an airplane or a back-seat driver of a compact car is no excuse to line the walls with tin.

Architects have the know-how. Engineers have the understanding, Builders have the ability and equipment. Manufacturers have the materials, as the current study so patiently explains.

The time has come to give the children in our schools the privilege of a little quiet discussion and even a bit of an opportunity to think, if they are so inclined.

DEFINITION: A school bus driver is a person who once thought that he enjoyed the company of young people.

AESOP, REVISED

AS THE school superintendent entered the biology laboratory, he was accosted by a wise old turtle. "Prof," said the turtle, "you mean well, but you talk too damn much." Amazed at such erudition in a turtle, the superintendent rushed to tell his board of education that his new methods were so powerful the school was even teaching turtles to talk.

The board members were extremely skeptical, as board members always are, and insisted on verifying the miracle personally. However, when they visited the turtle, he merely winked wisely and said nothing. Thereupon, the enraged board of education fired the superintendent forthwith.



The poor fellow sneaked back to expostulate with the turtle, but, before he could say a word, the turtle gave him a dirty look and remarked, "What did I tell you! You are a good guy, but you talk too damn much."

ADVISORY COMMITTEES

THE first few months after taking over his new job, a school administrator is expected to meet and remember all members of the P.T.A., the local service clubs, the special pressure groups, and several hundred advisory committees.

The story is told of one such school superintendent, overwhelmed by the multiplicity of advice and advisers, who was standing on the river bank probably wondering if he ought to jump in. Spying a huge log floating down the river, he turned to his wife. "That log reminds me of my new job;" said he, "if you could examine it closely, you would discover more than a million ants rushing around — and each one is probably convinced that he is the pilot."

EPITAPH

Poor dizzy Superintendent Blatt Lies quiet in this ground; For the round tables where he sat, Went round and round and round.



FULL HOUSE was typical of the hundreds of meetings held during the annual conference of the Association for Supervision and Curriculum Development. A sample of the large crowd that attended the first general session is shown in this photo of the 2600 capacity ballroom.

A.S.C.D. Looks 'Within' for Answers

LEO E. BUEHRING and PAT RUSSELL CHICAGO. — Education is significant to the national welfare. The question no longer is whether federal aid should be given to the country's schools. Today's concerns are "How?" and "How much?"

Excitement created by good news from Washington was in full bloom at the 16th annual conference of the Association for Supervision and Curriculum Development, N.E.A., held here March 12 to 16. The curriculum specialists (in even greater measure, perhaps, than did the superintendents attending the three regional meetings of the American Association of School Administrators) radiated enthusiasm. The self-image of the 3200 members who registered for the meetings grew taller with each passing hour.

Conant researches research. The man, who to segments of our population has become the "father image" of education in this country, James B. Conant, in his Monday evening discussion exercised the privilege of

a parent by talking "over the heads" of some of his children. His discourse, titled "Trial and Error in the Improvement of Education," had been announced by the office of the former president of Harvard University as a major address.

Standing on his experience as a scientist, Dr. Conant spoke on research design in a manner that highly pleased the intellectuals. Many of the overflow crowd of about 2800 found they were not sufficiently schooled technically to "get the message." To newspaper reporters who asked for copies of his address, the erstwhile inspector general of the nation's senior and junior high schools replied: "It is far too highbrow; any newspaper would be out of its mind to print it."

One point that all listeners could follow was the suggestion that the federal government conduct largescale experimentation to determine the effectiveness of various sizes of

(Continued on Next Page)



EXECUTIVF. COMMITTEE MEMBERS for 1961-62 approached their jobs in good spirits. They are (I. to r., seated): Chester Babcock, president-elect; William Van Til, president, and Arthur W. Foshay, vice president and immediate past president. Other members are (I. to r., standing): Lillian C. Paukner, C. Glen Hass, and Marcella R. Lawler. Committeeman Arthur J. Lewis isn't shown.

classes on the rate of student learning. Information gathered to date on this subject, Dr. Conant said, is not conclusive. He declared that much of present day "research" does not distinguish between facts deducted from theory and intended to lead to wide generalizations and facts with limited applicability. No serious attempt has been made, he said, to distinguish between learning and intelligence.

Dr. Conant called for a leap forward in education research along much more specific lines than has ever characterized investigation thus far, and urged A.S.C.D. to assume a major role. That he timed his initial appearance as a research specialist to this occasion and before this particular group was considered significant by the membership.

Stresses organized knowledge. "It is in the unity of these three — the child, society and organized knowledge — that future excellence in the schools will be found." This was the thesis of President Arthur W. Foshay in his address given at the opening session.

Explaining, Dr. Foshay said: "I was taught to believe that the curriculum arose from two fields: the nature of the growing child and the nature of society. Hindsight says that this theory was flawed from the beginning by a failure to acknowledge a third element necessary for the making of intelligent curriculum decisions, namely, the nature of organized knowledge."

President Foshay stated that curriculum theorizing in the future will have to take directly into account the nature of the various fields of knowledge, and the nature of knowledge generally. Involved, he said, is the importance of discovery as an aid to teaching — methods that permit a student to discover for himself the generalization that lies behind a particular operation, as, for example, in mathematics.

Be it resolved. Traditionally, the substance of A.S.C.D. program discussions has been summarized by resolution. This year there were 13 such resolves, only half the 1960 total. By resolutions adopted, the association did the following:

 Offered its services to the administrator of the Peace Corps in helping to prepare candidates.

2. Urged extension of the National Defense Education Act with the provision that the act be broadened to include funds for the improvement of additional curriculum areas and permit state and local school units to select from the list of reimbursements in terms of their own needs.

3. Voted strong support for the School Assistance Act of 1961 and expressed confidence that federal support through the act could be provided without federal control. Emphasized was the fact that the legislation is only a money bill and should not attempt by amendment to settle other issues, such as desegregation and the place of financial aid for parochial and other private schools.

4. Assigned to a commission the responsibility for working with other interested groups in setting forth clearly the cooperative, as well as the special, roles of curriculum and instructional leadors.

5. Declared its basic and vital inter-

est in the area of teacher preparation and continuing professional growth, while viewing any controversy relative to the contribution of the liberal arts and the professional education as based on false premises, since both are essential to a competent teacher.

Rejects two resolutions. The first of two resolutions found not acceptable dealt with enhancing teaching as a career and would have provided that an ad hoc committee be given the responsibility for formulating plans for rewarding "career teachers." The implication of "merit pay" was behind the defeat of this resolution, despite considerable support for the "career teacher" program sponsored last year by the then President William Alexander.

The second defeated resolution called for publication of a text on education "for survival." A substitute resolution dealing with intercultural understanding carried handily.

Members were kept busy. Aside from attending the three general sessions, a business meeting, and a luncheon-closing session, delegates spent most of their time participating in numerous group discussion meetings. Included in the latter were 30 "job alike" sessions in 46 sections (curriculum director, state department personnel, college professor, assistant school superintendent, and similar categories).

"Area meetings" discussed these five topics: frontiers of knowledge that have significance for improvement in education; learning — what is new in research on learning; planning at various levels for excellence in schooling for living in a democracy; processes and problems in developing and coordinating a reasonable K-12 school program for children growing up in a democracy, and change, direction and pressures for acceleration in the Sixties. Following presentations on these subjects in panel style, "area sessions" divided up into 77 discussion groups.

Other activities were the five "assemblies," held on each of two different days. They dealt with 10 different subjects of interest to curriculum people.

New officials take office. Balloting for new officers was done by mail last December. Successful candidates assumed their official positions at the luncheonclosing session.

In addition to President William Van Til and Arthur W. Foshay (who auto-

matically becomes vice president by virtue of having been the most recent president), the new officials are: president-elect. Chester Babcock, assistant state superintendent of instruction in charge of program, Olympia, Wash., and until recently executive director of the department of instruction and curriculum research, Seattle; executive committee member, Arthur J. Lewis, assistant superintendent in charge of elementary education, Minneapolis public schools, and currently adviser in the Ministry of Education, Iran. To fill the vacancy on the executive committee created by the elevation of Dr. Babcock. the committee named C. Glen Hass, professor of education, and director, laboratory school, University of Florida, Gainesville.

Continuing members of the executive committee are: Marcella Lawler, Teachers College, Columbia University, and Lilliam C. Paukner, director of curriculum, Milwaukee public schools.

New members-at-large to the board of directors are: Frances Blake, director of elementary education, St. Louis Park, Minn., public schools; Alexander Frasier, director, Center for School Experimentation, Ohio State University, Columbus; Geneva R. Hanna, associate professor of curriculum and instruction, University of Texas, Austin; Doris May Lee, professor of education, Portland (Ore.) State College, and Rodney Tillman, professor of education, George Peabody College for Teachers, Nashville.

In addition to the executive committee and the members-at-large, the board of directors also includes representatives from the 40 states in which there are affiliated organizations.

It's Las Vegas next year. Since the various sessions which are held concurrently at any annual conference require from 80 to 90 conference rooms, the hotels in the country that can meet the association's requirements were reported to be limited. One city that does meet the association's needs is Las Vegas, Nev., where the 1962 conference is to be held, March 4 to 8. In 1963 A.S.C.D. goes to St. Louis (March 10 to 14), and in 1964 to Miami Beach (April 5 to 9).

Other groups convene. Among other organizations which held meetings were the following: American Association of School Librarians, Council for Elementary Science International, Delta Kappa Gamma, Education in Family Finance Committee, International Reading As-

sociation, the John Dewey Society, National Council on State Consultants in Elementary Education, and National Council of Teachers of English.

Consultant views consultants. Arthur W. Foshay, A.S.C.D. president, took a hard look at his own organization and its members during the course of the meetings. To a representative of The NATION'S SCHOOLS, Dr. Foshay pointed out the shifting role of the curriculum specialist from supervisor to consultant to the school administration. Whereas the curriculum supervisor formerly sought to help teachers with their work directly, he now is available to give counsel to the principal of the school and through him to the teachers. He is not a supervisor of the principal's work; however, the smart administrator will use his (the consultant's) services in his (the administrator's) own best interest.

So far as A.S.C.D. is concerned, the professor of education at Teachers College, Columbia, and executive officer of the college's Horace Mann-Lincoln Institute of Experimentation, said:

"We have changed from a clubby, quiet, committee-like organization to a group that is making things happen. While members formerly concentrated largely on curriculum making, the scope of interests now being talked about and acted upon is being broadened steadily. Instead of engaging in organized worrying and reacting to things said and done by others in this field, A.S.C.D.'ers are asserting themselves more and becoming doers."

The organization is accelerating its pace and is learning to speak out courageously and vigorously on matters of general concern, such as departmentalization and team teaching, Dr. Foshay stated. "Members no longer are calm with one another; instead they are terrifically demanding ideas. While still consulting with one another, members of A.S.C.D. have learned to listen to each other for answers to problems, rather than looking for these on the outside."

Urges idea evaluation. William Van Til, who took office as A.S.C.D. president with the close of the conference, stressed that giant foundations frequently depend upon demonstration, not experimentation. "Often the missing ingredient is thorough evaluation. Some who have procured foundation grants are now alarmed at the spread of unperfected and unverified ideas."

One way to prevent the consumption of undigested ideas, the chairman of the

department of secondary education at New York University told a representative of The NATION'S SCHOOLS, is about to be demonstrated by the Michigan Association for Supervision and Curriculum Development. This group proposes a small but significant research project to appraise the Midwest Program for Airborne Television. The organization plans to work in cooperation with Michigan school systems receiving the telecast in an effort to determine its actual value to the schools.

Dr. Van Til also stressed the need of his organization to help educators be heard in great debates on education (Continued on Page 154)





DIRECT APPROACH to organized knowledge was advocated by President Arthur W. Foshay (upper photo) in his major address at the opening session.

NEW ENERGY is flowing through the collective organizational system, said Margaret Gill, executive secretary (lower photo). Membership has risen by 300 to a new total of 7259. Convention site for 1962: Las Vegas, Nev.

Shortage of Classrooms and Teachers Will Continue

CRAIG E. PETERSON

Assistant Director of Market Research, The Nation's Schools

THE U.S. Chamber of Commerce in a March release states: "There is no need for federal aid to education because the country is heading toward public school classroom and teacher surpluses, rather than shortages." The statement asserts that "by the end of this decade, if present classroom construction continues, the country will have a surplus of about 80,000 classrooms. . . . If the present rate of training new teachers continues, the country will have increased the annual number of college graduates prepared to teach by 75 per cent, while annual pupil increases will drop in half."

The chamber cited a Dec. 14, 1960, U.S. Office of Education report on classroom needs as a basis for its statement on surplus classrooms and used the following arithmetic for its "surplus":

312,000 classrooms (for enrollment increases totaling 8.7 million by 1970) plus

131,600 classrooms (to make up current shortage) plus

166,400 classrooms (to replace obsolete, abandoned classrooms) equals 610,000 new classrooms needed by 1970.

The U.S. Chamber of Commerce alleges that currently this country is building 69,000 classrooms annually, and if this rate continued for the next decade, 690,000 new classrooms would be built by 1970. This will create, says the chamber, a surplus of 80,000 classrooms.

Had the chamber exercised some patience and reportorial follow-through, it would have found some pertinent statistics published in January 1961 by the Office of Educa-

tion. For example, the current shortage of classrooms is 142,100, not 131,600 as reported.

The reported 312,000 classrooms for enrollment increases is a median figure based on an assumption of the 1955-57 birth rates. Different birth rates could raise the total need as high as 686,000 or as low as 535,000.

Further, the chamber assumes that the distribution of population is similar to the distribution of public school facilities and is likely to remain so. This, of course, is a false assumption. Population shifts are extremely important in creating surplus classrooms in some areas, dangerous shortages in others.

There invariably is a time lag between community expansion and school facilities expansion; even the Office of Education cannot accurately include this factor in its estimates for the future. Also, the financial ability of individual communities is not related to school population, and federal aid is, as has been proven in the hospital field, the best way to equalize tax income and educational needs.

Important Factors Ignored

In support of its claim about a teacher surplus, the chamber cites random statistics dealing with teacher-pupil ratios, teacher graduates, and annual pupil enrollment increases. From these figures, the chamber concludes a surplus without considering attrition of teachers into commerce and industry, fluctuating needs for classrooms dependent upon teacher-pupil ratios, needs for instructional personnel with highly specialized training, and many other apparent factors.

The case against federal aid cannot be resolved simply by estimating the possible teacher force. There is also the matter of teachers' salaries and the extent to which going rates for the instructional staff can attract newly certified and competent teachers or even hold the present force without drastically upgrading the financial status of the teaching profession.

The task of gathering and reporting education statistics is a difficult one. At times, the Office of Education and other qualified agencies see fit to adjust data on current and needed facilities and staff virtually on a week-to-week basis. At times, too, these data are flexible guesses, but usually well founded ones.

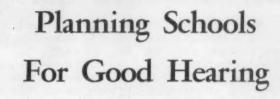
Outdated Statistics

It is unfortunate that the chamber of commerce has seen fit to use outdated information to suit its own cause of no-aid-to-education. The chamber of commerce, too, has fallen victim to the urge of drawing a specific conclusion from general data.

The need for more classrooms and the need for more and better qualified teachers are critically apparent. The need for public awareness of these needs is even more apparent and important. Public statements, such as those of the chamber, can be misleading — even dangerous.

^{*}Ten-Year Aims in Education—Staffing and Constructing Public Elementary and Secondary Schools, 1959-1969, Office of Education, Department of Health, Education and Welfare, Jan. 19, 1961.

Fall 1960 Statistics on Enrollment, Teachers and Schoolhousing in Full-Time Public Elementary and Secondary Day Schools by State, advance data from Office of Education Circular No. 634 with accompanying news release, Jan. 19, 1961.



Administration Study No. 9

H ERE are thirty-two pages of directions for planning and equipping a "good hearing" school. Bolt Beranek and Newman Inc., recognized authorities in the field, tell how to design the plant. Staff writers interview industry representatives to report latest developments in acoustical materials and equipment. Study includes 20 sketches and 19 photographs.

Auditorium, Oak Ridge (Tenn.) High School. Architects: Skidmore, Owings and Mervill, Chicago and New York.

HOW TO DESIGN A SCHOOL FOR GOOD HEARING

Text by LLOYD J. WILLIAMS

Illustrations by C. WILLIAM BRUBAKER and WESLEY S, WIETING

IN THIS time of clamor for better education, it is unfortunate that good hearing conditions — one of the prime requisites of the physical plant — are often overlooked in the design of the school. Truly adequate school design must include a recognition of the necessity for these conditions as well as a basic knowledge of what is involved in achieving them.

The importance of this aspect of school design cannot be overemphasized when one considers that education is based on communication of ideas from teacher to student. If the student is not to be shortchanged educationally, he must be provided with all of the necessary facilities.

Good Hearing Conditions. There is no black magic involved in assuring good hearing, but one must satisfy a number of basic requirements: (1) adequate loudness of the message the student is to hear; (2) a low enough background noise level so that the message is not masked or the student distracted; (3) avoidance of confusing, long-delayed reflections of sound from remote, hard surfaces; (4) freedom from repeated reflections of sound between hard, parallel surfaces; (5) control of the persistence of sound (reverberation).

Loudness. Adequate loudness of the message depends on the relation among the following: (1) the level of the direct and quickly reflected sound that the students hear; (2) the level of noise composed of intruding sound from other spaces, and (3) the normal background noise from other occupants of the room, mechanical systems, and so forth.

In small spaces the direct sound from the teacher's voice, reinforced by useful reflections from the ceiling, provide adequate loudness if there is little intruding noise. In larger spaces more care must be taken to provide reflecting surfaces that direct energy from the speaker to the student.

Background Noise. A low background noise level is achieved in several ways. The mechanical system must neither produce excessive noise nor provide "speaking tubes" for noise from outside areas.

It is possible in the early stages of school design to use foresight and thus simplify achievement of the acoustical goals. The basic requirements for quiet in many of the learning spaces, for example, may be achieved in the early planning stage by locating the noisy shops, boiler room, and gymnasium areas far from the classrooms and music spaces.

Sound-absorbing materials are required in some areas to reduce the noise generated by activities in the room. For example, the gymnasium, shops and swimming pool require treatment with sound-absorbing material to reduce noise.

Echo Control. Long-delayed reflections of sound from remote, hard surfaces will be avoided by careful room design. If the path of sound between the speaker, reflecting object, and student is more than 70 feet

longer than the direct path of sound from the speaker to the student, then the reflected sound will usually be heard as a discrete echo. Concave surfaces will reconcentrate reflected sound.

The reduction of these reflections may be accomplished in the planning stages by reducing the reflecting surface area, making the surfaces convex so they will not reconcentrate sound, and adding sound-absorbing material. Reverberation control also is involved with such treatment.

Flutter Control. Freedom from repeated reflections of sound (flutter) between hard, parallel surfaces may be achieved by reducing parallelism, either vertically or horizontally.

Reverberation. Control of the persistence of sound is calculable and has been considered, in some circles, as the only requirement for good hearing conditions. (While it is certainly an important part, it is not the only requirement.) Addition of soft, sound-absorbing material in many spaces of the school is required. However, indiscriminate application of sound-absorbing material throughout the school on all ceilings will not result in optimum hearing conditions in all spaces.

All educational spaces in a school have potential acoustical problems. The solutions to the problems are varied but rest on the general foundation of providing good hearing conditions in each space.

(Text Cont. PP. 97-114 inclusive)







LLOYD J. WILLIAMS (upper left) has been an architectural consultant in acoustics for Bolt Beranek and Newman Inc., Cambridge, Mass., since 1956. Mr. Williams currently is lecturing on acoustics at the Boston Architectural Center. A native of Berkeley, Calif., Mr. Williams was a draftsman for Thorshov & Cerny, architects, in Minneapolis from 1950 to 1953. From 1953 to 1956, he served as a lieutenant in the navy. C. WILLIAM BRUBAKER (photo at right) is a partner in the architectural firm of Perkins & Will (Chicago; White Plains, N. Y., and Washington, D.C.). His interest in educational architecture has led to his participation in educational programs and conferences in all parts of the country. His free and easy sketch style is well known. Working with Mr. Brubaker in translating many of the ideas in this study to sketch form was WESLEY S. WIETING (lower left), research and resources director for Perkins & Will. Mr. Wieting is also a frequent contributor to educational and architectural publications. He has participated on many panels and programs sponsored by manufacturers' groups to investigate improvements in products used in school architecture.



Photo by George Miles Ryan Studios, Minneapolis

KINDERGARTEN at Wenonah School, Minneapolis, has fully treated ceiling and draperies for general reverberation and noise control. Architects: Cerny Associates Inc., St. Paul, Minn.

Requirements for good aural communication: Airtight separation between classrooms; controlled background masking sound level; planned reverberation

THE reduction of noise transmission from one room to another is a requisite for good hearing conditions and must be achieved to improve communication of ideas and to avoid distraction of the student. It must be recognized that the transmission of sound from one room to another will be materially reduced only by interposing an airtight barrier between them.

Isolation. The degree of noise reduction required between usual classrooms to prevent distraction and annoyance of students is partly dependent upon the amount of continuous masking noise present in the
classroom, partly dependent on the
tolerance of the room occupants, and
partly dependent on noise levels in
adjoining areas.

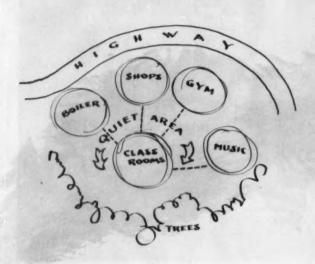
The background masking noise level is limited by the requirements for quiet in lecture rooms and other teaching spaces. The noise reduction to background noise relation for speech privacy has been established, and it is possible to engineer solutions for the problem of speech interference between classrooms, offices and laboratories.

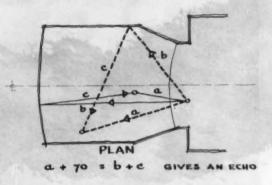
However, the music program requires more noise reduction and may tolerate less background noise. Therefore, more isolation than the minimum required for speech privacy should be provided in the best of our new schools.

Preventing the transmission of excessive sound from adjacent classrooms primarily requires that the partition be of sufficient weight and airtightness. Unfortunately, many school building codes require doors connecting one classroom to the next for fire egress purposes. Though this may be highly desirable for safety purposes, it is most undesirable acoustically. The light weight of the door panels and the cracks around the doors permit transmission of considerable amounts of sound energy.

The school administrator cannot rely upon the opinions of teachers as to the seriousness of this problem; the disturbing sound that is transmitted from the next classroom may be inaudible to the teacher at the head of the class while it may be hopelessly distracting to the student nearest the door.

Such a problem may be evaluated by standing in the back corner of a room nearest the interconnecting door during active use of both rooms FIRST STEP in solving sound problems: Isolate noisy areas from quiet areas in early stages of schoolhouse planning. Noisy areas, such as shops and gymnasium, can be near traffic outside school. REFLECTED SOUND will be heard as echo when path of sound between speaker, reflecting object, and student is more than 70 feet longer than the direct path of sound from speaker to student.





and judging whether or not there is sufficient intelligibility of the transmitted sound to cause distraction to a student trying to concentrate on a quiet activity like reading. The best answer to this noise path is to eliminate the door. However, if doors must be installed, the next best answer is to use a solid wood core door at least 1% inches thick, with airtight gasketing on all four sides.

Noise transmission from classroom to classroom often occurs over the tops of even the best partitions if the ceiling material is lightweight and porous. This is particularly true if some of the open metal, joist-types of constructions are used above an acoustical tile ceiling, or if corrugated, metal roof decking is used.

This path of noise transmission can be eliminated most effectively by using a plaster or gypsum wallboard ceiling. Required sound-absorbing material should be applied beneath this continuous, airtight, plaster ceiling. There now are dense acoustical boards that provide sufficient isolation. The solution of extending the classroom partition to the roof decking above also is possible, but the necessity for an airtight seal cannot be overemphasized.

Other parts of the good hearing complex within most classrooms depend primarily on loudness and a low enough reverberation time. The problem of long-delayed reflections of sound energy from remote surfaces usually is not present because normal classroom sizes do not have "remote" walls. The problem of repeated reflections of sound energy between hard, parallel surfaces usually is solved by the furniture, tackboards, blinds and so forth.

The primary grade teacher usually is near the pupil and does not require reinforcing reflections to achieve the loud signal needed to hold the pupil's attention. Reverberation control and noise reduction for playtimes may be provided by a sound-absorbing ceiling.

The upper grade classrooms and lecture areas of moderate size require better projection of sound from the teacher to the student. To aid the teacher in a more formal, lecture-type room, it is important to provide hard sound-reflecting surfaces near and around him to help project his voice to the students. For this reason, a hard, sound-reflecting center portion of the ceiling often is found in the best classrooms. This measure

allows a strong, first reflection of sound energy from the teacher to reach the student, improving the loudness of the direct sound. This hard, reflective ceiling area also allows the students' questions to be heard by other students.

Since the reverberation time of a lecture-type classroom should be low to improve speech intelligibility, it should be remembered that if a hard surface is left in the center of the ceiling to help project sound to the student, sound-absorbing material on the perimeter of the ceiling and on the upper wall surfaces also is necessary to reduce reverberation. Once again, remember that distraction from outside noise or mechanical equipment noise is to be avoided, but some background noise is required for privacy.

When selecting the location for classroom areas, care should be taken to avoid exposure to highways, train tracks, or other sources of noise from the community. However, if classrooms must face such noise sources, serious consideration should be given to the need for a central, ventilating, air supply system and permanently sealed, % inch plate glass windows.

There is no practical method of





EXAMINE the shape of all rooms where projection of sound or avoidance of an echo is important. In diagram at left, "poor" means parallel walls or ceilings reflect sounds. "Better" means splayed or sloping surfaces break up the sound.

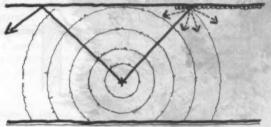
controlling the noise of a passing truck if the classroom windows are open on a hot day in the spring. Also, under-window, ventilating supply units with fresh air intake grilles in the exterior wall have exactly the same effect as an open window, except the air inlet grille will be open year-round. Thus, it may be necessary, in order to exclude traffic noises, to draw air into the building at a central point and provide acoustical treatment within the ductwork.

If fresh air is supplied in considerable quantities to a classroom, it has become fairly standard practice to provide louvers in the door or the corridor wall to allow the transfer of the exhaust air to the return fan by means of the corridor. Generally, this is not acceptable from the point of view of noise transmission because louvers directly across from one another in a fairly narrow corridor often provide a direct path for noise transmission between classrooms. In general, better practice indicates that exhaust air should be ducted all the way to the fan, or that it should be sent into the corridor through acoustically treated transfer ducts.

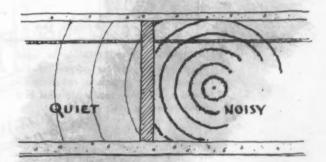
As the relationship between noise reduction, background noise, and

HARD, SMOOTH

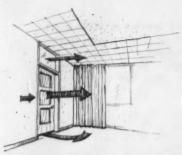
SOFT, TEXTURED ADSORPTIVE MATERIAL



SOUND WAVES that strike contrasting materials are either reflected, broken up, or absorbed, depending on the characteristics of the surface.



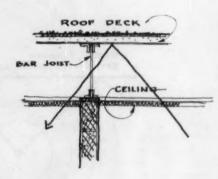
TRANSMISSION of sound from one room to another is reduced materially by massive airtight barrier, such as a heavy masonry wall, placed between the rooms.

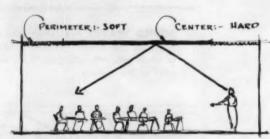


TRANSOM PANELS,

door panels, and cracks around doors (above) permit transmission of considerable amounts of sound energy from room to room.

> NOISE is transmitted from one room to another (right) when partition stops at the bottom of bar joist and the ceiling material is porous.





IN LARGE CLASSROOMS, a hard sound-reflecting center portion of the ceiling permits a strong reflection of sound energy from teacher to class and from student to class.



LOUVERS in doors or open windows directly across a corridor provide a direct path for noise transmission between the classrooms.

Massive, air-tight

speech privacy has been established, it is possible to engineer a solution to the problem of speech interference between classrooms, offices and laboratories. Ideally, the amount of audible sound transmitted should be inaudible in the next classroom. If the "listening" room is completely quiet, inaudibility will be quite difficult to attain

Audibility and intelligibility of sound are relative. It is the relationship of the signal to the background noise which is important. In the middle of the night, the dripping faucet in one's house can keep one awake for hours, whereas in an airplane one must raise his voice to converse with a neighbor. If the background noise level is set too low for the environment, one will hear and understand sounds from the next room. However, with a higher background noise level, one will not hear and understand sounds from the next room, although the background level itself may be too noisy.

A common, reliable and controllable source of continuous "masking" or background noise that generally is not too high for most classrooms is the ventilating equipment provided for the room. A well built, continuously operating, underwindow ventilating unit provides a very steady, comfortable level of masking noise.

Visual Aids. The question of proper loudness of signal may be extended to the use of audio-visual aids in classroom teaching. Many of the systems of sound amplification equipment, which usually are provided as permanent installations in our schools, are quite inexpensive, are of poor quality, have high distortion units, and are designed strictly for paging.

The television set usually contains a 3 inch loudspeaker, which is often of poorer quality than that provided in the paging system. The loudspeaker used for reproduction of

walls provide best aural separation for classrooms

motion picture sound is of slightly better quality but is almost always placed on the floor at the front of the room where it blasts the front row students. It is almost completely shielded from students in the back of the room.

It is suggested that in the initial planning of school buildings, serious consideration be given to installing a high quality loudspeaker that is mounted above the chalkboard at the front of the room and aimed at the center of the floor so that the sound it reproduces is directed uniformly through the seating area. Such a unit should be capable of reproducing with a high degree of realism both speech and music sounds, including broadcasts and announcements from the central office as well as motion picture and tele-

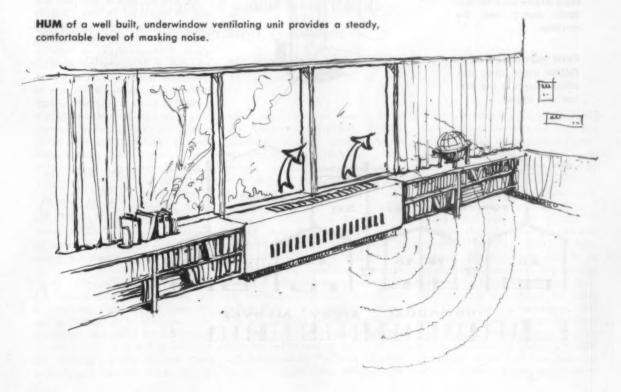
vision sounds. A receptacle to plug in the motion picture projector and the television set should be provided at both the front and back of the room, and all of the school's audiovisual aids should be equipped with plugs to fit the receptacle.

Another acoustical problem in the use of audio-visual aids is the noise produced by the motion picture or slide projectors. School officials and purchasing agents should require the manufacturers of such equipment to provide a projector which is so quiet as to produce no noise interference with the loudspeaker sound even for a student who is sitting beside or behind the projector.

Since these machines are not available at present, a possible stopgap is the portable projector enclosure. Such an enclosure may be simply a

large plywood box having a glazed port in the front and doors in the back or side to provide access for loading of the projector. The interior surface of the enclosure should be treated with efficient sound-absorbing material. The projector should be isolated from the table on which it is placed so that the table does not become a sounding board for the equipment.

Flexibility. Another acoustical problem which has grown from modern teaching technics is that of increasing demands for flexibility of classroom size. Often this flexibility is sought in thin, leaky, lightweight folding partitions to divide large classroom spaces and in other approaches which omit corridor walls and doors. In theory, this flexibility





cated in classroom, is placed above chalkboard at "front" of room and is aimed at center of seating area to direct uniformly the sound reproduced.

LOUD SPEAKER, if ideally lo-

corporated lead to extreme difficulties in noise control and privacy between groups.

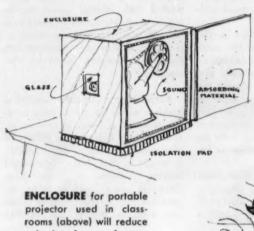
The need for a low background noise level and freedom from distraction for students in any conceivable learning situation points to the need for good aural separation of groups. Of course, the learning groups may be varied in size. They may be separated either by construction of a substantial nature, or by distance, which is not always economical, or by time, which is feasible but re-

may add to teaching convenience. However, the measures generally in-

quires some care in scheduling. It would seem, then, that the flexibility in school planning should include various sizes of spaces for teaching and allow for the change in classroom group size by moving students

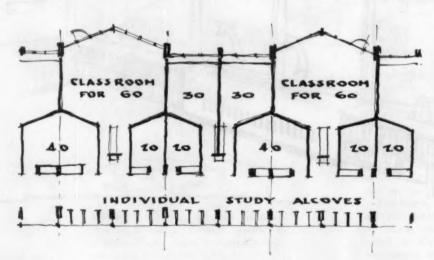
instead of classrooms.

This sort of flexibility is useful and does not lead to mistakes that can shortchange not only students but teachers and the whole community. There are, of course, technics and newly devised uses of materials that may be employed in very carefully engineered situations to provide for useful subdivisions of some teaching spaces. If these technics are fully engineered, it is possible to subdivide specialized teaching areas at considerable initial expense, which may be justified in terms of long-time savings.



noisy interference for students seated near the machine.

THIN MOVABLE PARTI-TIONS (right) often lack efficient seals at top, bottom and edges.



PLAN here permanent partitions to provide teaching spaces of various sizes.



Photo by Bill Hedrich, Hedrich-Blessing, Chicago

Auditorium, East High School, Aurora, III. Architects: Perkins & Will, Chicago.

Uniform distribution of sound from the stage and maximum reverberation, consistent with intelligible speech, are essential for auditoriums

AUDITORIUM above illustrates good shaping principles with hard plasterred main ceiling planes, relatively high balcony soffit, and splayed balcony face. "Opening up" of underbalcony areas provides better hearing conditions from position of seats and avoids poor hearing conditions usually experienced in deep, low-ceilinged, underbalcony areas. Reverberation control is achieved by sound-absorbing panels on side walls.

A N AUDITORIUM is aptly named. One of the primary distinctions between a typical classroom and an auditorium is, of course, size. In addition, the use of the auditorium is more varied, as it will include not only lectures but also dramatic productions and concerts. To satisfy its

name, an auditorium must fulfill all the requirements for good hearing: quietness, freedom from echo and repeated reflections of sound energy, proper reverberation time, and a maximum of uniformly distributed sound energy from the stage.

Most of the useful sound reflections for stage sources will be from the ceiling, since it is the largest unencumbered surface in the room. In the classroom, a simple, flat patch of sound-reflecting material provides sufficient reflecting reinforcement. In the auditorium, however, the plaster ceiling should be broken into planes that are carefully oriented to distribute the reflected sound uniformly over the entire seating area.

In determining the most effective shapes of auditorium ceilings, one finds that reducing the height of the room toward the rear not only permits more use of available reflective ceiling surface but also minimizes the rear wall area. Thus, it reduces the amount of added sound-absorbing material required to reduce long-delayed reflections from this surface.

Side wall areas also should be carefully shaped to reduce repeated reflections between hard parallel surfaces. However, some degree of parallelism is beneficial in providing sufficient reverberation for music performances. It also should be noted that extremely wide fan-shaped floor plans have serious balance problems for musical presentation because people sitting on one side of the hall at extreme angles will hear one side of the orchestra much more clearly

AUDITORIUM at Grandview Junior High School in Mound, Minn. (upper right photo), shows the hard, central ceiling areas (exposed steel deck) with sound-absorbing treatment confined to low side aisles in the form of standard, fissured, mineral acoustic tile. Architects: Cerny Associates Inc., St. Paul.

KIVA at Michigan State University, E. Lansing, has difficult shape for proper acoustics (domed ceiling with cylindrical side walls). It was made into a successful experimental classroom-auditorium by suspended plaster panels that distribute reflected sound uniformly from one part of the room to another. The dome is finished in sound-absorbing, sprayed asbestos material to minimize further the problems of focusing of sound and to provide reverberation control. Focusing of sound from the cylindrical side walls is minimized by patches of draperies and deep projecting structural columns. Carpeting also is used for reverberation control and to quiet footfall noise. Architect: Ralph Calder, Detroit.









WOOD PANELS are used to form a properly shaped, hard, sound-reflecting ceiling in the auditorium of the Rome Free Academy in Rome, N.Y. The only sound-absorbing treatment is in the form of upholstered seats (which minimize reverberation time change with varying audience size) and the rear wall treatment (which also provides echo control). Architects, Perkins & Will, Chicago.

Photo by Bill Hedrich, Hedrich-Blessing, Chicago

AUDITORIUM at Niles
Township High School in
Skokie, Ill., shows an effective shaping with hard panels over the entire ceiling
and at side walls. Lighting,
air conditioning, grilles and
acoustics are well integrated
in this particular design.
Note the upholstered areas.
Architects: Holabird and
Root, Chicago.

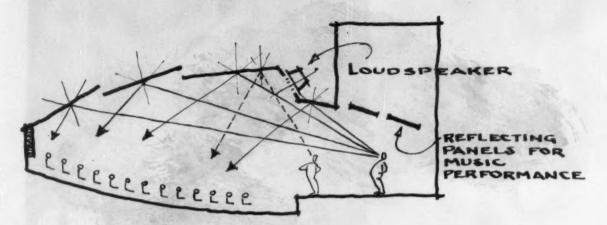


Photo by Bill Engdahl, Hedrich-Blessing, Chicago



LITTLE THEATER at Proviso West High School (upper left photo) shows effective handling of small auditorium. Splayed, brick side walls provide "flutter" control; rear wall sound-absorbing treatment is used for echo control; strips of acoustical tile on the side ceilings, vertical strips of acoustical treatment between the splayed side wall panels, and upholstered seats provide reverberation control. Important to good sound conditions is the hard ceiling over the stage and throughout entire central part of main ceiling.

AUDITORIUM at Evanston Township High School in Evanston, Ill., has hard plaster ceiling. High degree of breakup of the ceiling improves the diffuse quality of reflected sound; this is especially desirable for listening to concerts. Sound-absorbing treatment in form of vertical baffles projecting from the side walls provides reverberation control. Note the upholstered seats and the "central" loudspeaker grille. Architects for Proviso and Evanston: Perkins & Will, Chicago.



shape of an auditorium can be used to distribute the sound where wanted by reflecting it off the walls and planes of ceiling. For sound, as for light, the angle of incidence is equal to the angle of reflection.

The audience itself will provide most of the sound absorbing material for reverberation control in auditoriums than will people on the other side.

Reverberation time in the auditorium should be carefully controlled. The room often will be used for music, and music does not require the articulation demanded by speech. It is much more successfully and enjoyably performed in a reasonably reverberant room. Thus, for music, it is important to achieve the maximum reverberation time in the auditorium consistent with good speech intelligibility.

Most of the sound-absorbing material for reverberation control in an auditorium is provided by the audience. This is advantageous because it saves in the cost of purchasing special additional sound-absorbing material. While a full audience may provide a satisfactory amount of sound absorption, the hall should be provided with fabric-covered, fully upholstered seating. If this type of seating is not used, the auditorium will be unusable for small audiences, for choral and orchestra rehearsals, and for play rehearsals.

Applied sound-absorbing material usually should be installed on the rear wall of auditoriums for echo control, even if these surfaces are minimized by reducing the ceiling height. Rarely does a well designed auditorium need a great deal of sound-absorbing material on the ceiling or side walls.

Even in the smallest auditorium a sound amplification system should be provided for reproducing motion picture sound, television sound, and recorded or broadcast programs. In the larger auditoriums and in some extremely large lecture spaces, it will

Multipurpose rooms are 'acoustical compromises'

be necessary to provide enough microphones for amplification of live speech, since the distance between the speaker and the remote listener is great.

When considering the installation of sound amplifying equipment, many factors must be kept in mind. Sufficient quality of reproduction for full intelligibility is certainly a minimum requirement. For reasonably realistic reproduction of music, the tonal quality of the reproduction system becomes quite important. Uniform loudness throughout the listening area and freedom from feedback are certainly important, as is the sensation that the amplified sound is coming from the same location as the direct sound from the speaker or performer.

Reliability of equipment and low maintenance cost should not be underestimated. When the administrator considers a 10 to 20 year use without major overhaul, the initial purchase price should be the least important consideration in selecting sound amplification components.

In order that the systems may be integrated into the acoustical design of the auditorium, it is important to have the specifications for a sound system written by an independent party who can recommend equipment of various manufacturers without prejudice and who is familiar with the problems of room acoustics.

In well designed halls, locating loudspeakers behind a grille in the ceiling directly above the center of the proscenium often leads to the most realistic reproduction of sound from the stage area. When microphones are to be used in conjunction

with this arrangement, the loudspeaker system must consist not only of the customary cone-type of speaker, but also must include direct expansion, horn-type loudspeakers or other directional systems to avoid feedback.

It is impossible for an auditorium to be too quiet. The use of sufficiently heavy construction to prevent intrusion of exterior noise is the first step in providing an acceptably low background noise level. Further reductions in background noise can be obtained by careful treatment of the ventilating system; using solid wood, fully gasketed doors; treating the surrounding areas with sound-absorbing materials to reduce intruding noise levels, and carefully isolating mechanical noise sources. This vibration-isolation is the removal of direct mechanical connection between noisy equipment and building structure.

The treatment of the mechanical system, of course, includes removal of "speaking tubes" from other areas as well as reducing fan noise. The supply and exhaust fans for the ventilation system should be located as far as possible from the auditorium.

In almost any auditorium it is desirable to provide enclosed facilities for motion picture projection. In smaller rooms, building code requirements for such booths may be excessive, and a conventional booth may not be justified. If this is the case, a small partial enclosure such as that described for classroom use (see page 97) could be employed, or better, a small glazed window in the center of the rear of the room could permit projection from the lobby.

When a standard projection booth

can be provided, it should be large enough to include the sound amplification system control console and should have a special table and operating window for that purpose. In addition, the observation and projection ports must be glazed; sound-absorbing material should be installed on the ceiling and at least part of the wall surfaces of the projection booth.

Assigning multiple functions to auditoriums (calling them cafetoriums. audinasiums, multipurpose rooms, and the like) is usually a "penny wise" solution to the space problem. Generally, these rooms are poor compromises for the functions assigned to them. An auditorium must have a sloped floor for good sight lines and good hearing lines; a gymnasium must have a flat floor. An auditorium needs a hard, sound-reflecting ceiling; a gymnasium, cafeteria and the like should have sound-absorbing ceilings to reduce noise. The kitchen facilities next to a cafeteria often are used after the mealtime, thus reducing the usefulness of the cafetorium by the intrusion of dishwashing noise.

One estimate of the investment required for movable tables and chairs plus the custodial time required to set up and fold these furnishings shows that it pays to build two spaces. However, budget restrictions sometimes force compromises; if multiple use of space is mandatory, careful study by expert engineers is indicated. It is possible to compromise on auditorium acoustics and other functions, but it is well to recognize that conditions will not be ideal for any room assignment.

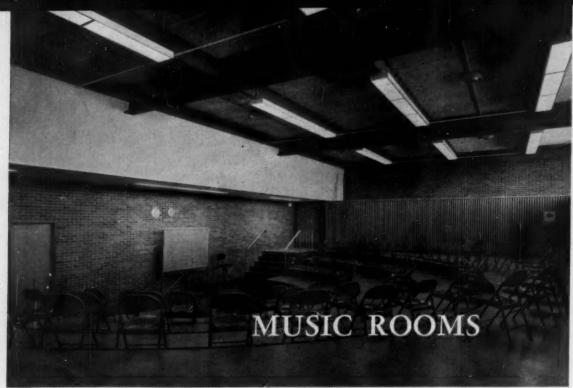


Photo by Hube Henry, Hedrich-Blessing, Chicago

Music Room, Proviso West High School, Hillside, III. Architects: Perkins & Will, Chicago

Isolate music theory rooms. Conflicts between band and practice rooms can be relieved by buffer planning. Wiggling walls cure booming.

THERE are three critical acoustical problems in the music department of any school: (1) sound isolation between adjacent music rooms; (2) adequate isolation of the entire department from surrounding activities – from the auditorium in particular; (3) correct control of the acoustical environment within each of the music spaces.

Unfortunately, a great deal of money is wasted every year in constructing music practice rooms and teaching spaces which are so poorly isolated from their neighbors that either they are unusable for their designed function or scheduling has to be arranged so that the spaces are used only half of the available time.

The most critical isolation problem in the music department is that of the music theory classroom, where the intrusion of even barely perceptible tones or rhythms will destroy effectively the efforts of the most accomplished teacher. Music theory examinations are often such that the student must retain rhythms and tones over a period of time; if the student is not to be seriously handicapped, extremely complex constructions must be employed to assure complete quiet.

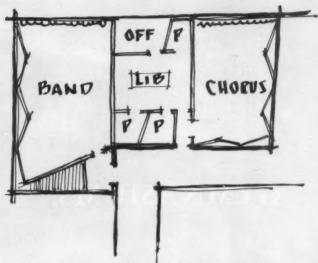
In general, the most economical approach to the critical isolation required is the scheduling of music theory classes in rooms outside the music department. This solution may represent a considerable inconvenience to the music theory teacher, but it may be the only recourse. An example of the complex wall construction required to isolate these spaces is two independent 4 inch brick walls spaced 4 inches apart with independent plaster skins extending from slab to slab.

The music theory room also should

have an airtight plaster ceiling resiliently suspended from the roof by rubber-in-shear type hangers, and the floor should be kept free of rigid contact with any other portion of the structure.

For ideal isolation, the construction of the band and choral rooms should be identical with that described for the music theory room. However, if the choral director can just hear the band, he normally will be able to tolerate this condition because the use noise in his own room will cover up the band sound most of the time. Even under these conditions, heavy, solid, masonry walls and floor slabs separated from the structure are required to reduce sound transmission to a reasonable degree.

Isolation through doors in music areas is quite difficult to match to the previously described wall construction. In general, doors should



CHORUS and band rooms are separated from each other by music library and practice rooms. Note that band and chorus rooms each have a vestibule for isolation from corridor.

be installed in pairs, spaced 5 to 6 feet apart, with the intervening space forming a sound lock. The customary location of music area practice rooms directly off the band or choral rooms is almost totally unsatisfactory unless special, expensive, "soundproof" doors and multiple glass, observation ports are used.

A much more economical way to achieve the isolation required is to locate the practice room doors either off storage spaces in the music library or off a corridor, thus providing space between the two sets of doors without wasting space in sound locks.

Ventilating supply and exhaust ducts should be run separately from the fan room to each of the important music rooms, and they should not be permitted to bridge from one room to the next. Acoustically treated ventilating ducts must be provided to carry both supply and return air to each individual space.

In order to achieve acoustic isolation between spaces, all doors must be tightly closed and no louvers may be used through walls. It is a wise measure to include no operating windows in the music department because sound transmitted out one window returns through another open window and may completely circumvent all other precautions.

The music department should be isolated from the remainder of the school, preferably by buffer spaces, such as shops, cafeteria, storage

spaces, corridors and other rooms not requiring low background noise levels.

Unfortunately, reasons of easy access for faculty and students often require that the music department be located immediately behind the stage of the auditorium. If this is necessary, heavy masonry, solid construction must be employed between music areas and the stage. Buffer spaces, such as uniform and instrument storage, should be arrayed along the common wall to further reduce transmitted noise. Direct single door communication between band and/or choral rehearsal rooms and the stage must be avoided.

Complex long paths through corridors and two or three sets of heavy doors will still provide only marginal isolation between the band room and the stage during rehearsals or lecture use.

After sufficient isolation has been provided between music spaces, the interior room acoustics must be considered. For proper rehearsal of large groups, maximum reverberation time (within limits) should be achieved. Therefore, a band practice room or choral practice room capable of housing between 50 and 90 students should have a minimum ceiling height of 15 feet from the highest riser to the lowest part of the ceiling.

The degree of reverberation control depends somewhat on the type of use. For example, if the band room is used only for winter time rehearsals by the football band, there is little doubt that the room should be made nonreverberant. Note, however, that the ceiling height must be maintained so that all students may hear each other and the instructor, and thus play together better. On the other hand, as the importance of concert and choral work increases, there is a desire for higher reverberation time.

Unless the auditorium and the stage enclosures are carefully designed to return a certain amount of energy to the performers on stage, the rehearsal room will seem more reverberant than the auditorium. Thus, the rehearsal area should be less reverberant than the auditorium in all cases, if the final concert is to be successful.

The music instructor may believe that the sense of enjoyment in participating in day-to-day practice sessions is more important than the final performance. Hence, he may wish a room that is large and reverberant. This conflict may be partially resolved by providing the room with some movable sound-absorbing material, such as a heavy three-layer drapery.

A well designed band or choral room will have two walls which are splayed or wiggled with approximately half of their surfaces sound-absorbing. This treatment provides both a degree of diffusion and low frequency absorption, thus preventing the room from "booming."

The smaller music areas, such as the practice rooms, should have incommensurate dimensions; they should have at least one wall out of square to reduce a bunching of room resonances which make the room sing back to the performer when he strikes certain notes. This "bathroom tenor" effect may be reduced further by providing a full sound-absorbing ceiling and one sound-absorbing wall in each practice room.

In order that the architect may provide the best possible music conditions for vocal music and band practice, it is desirable to provide different spaces. The curriculum provides the school planner and his consultants with a guide to the emphasis, size and use of a single music room if the budget decrees that only one such space may be built. Therefore, it is most important that the music instructor make his needs known in the preliminary stages of planning.

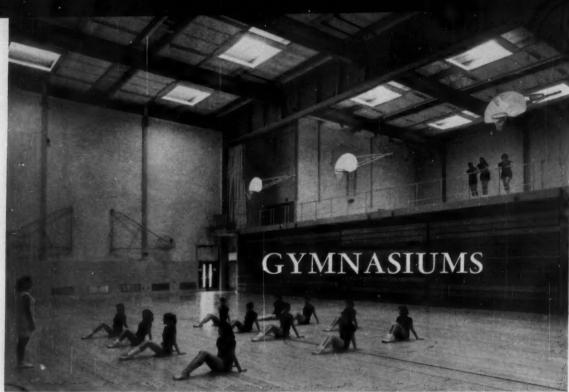


Photo by Bill Hedrich, Hedrich-Blessing, Chicago

Gymnasium, Proviso West High School, Hillside, III. Architects: Perkins & Will, Chicago

Remote ventilation units make for better over-all quiet. Solid truss barriers augment folding acoustical partitions

M OST instructional areas in the physical education department require a large amount of internal, noise controlling, sound-absorbing material. The degrees of isolation required between large spaces generally are not as critical as those required between the usual classrooms, and higher background noise levels may usually be permitted.

If the gymnasium is to be used exclusively as a playroom for younger children, the only acoustical requirement is to install an efficient soundabsorbing ceiling. If the space is for older students where more instruction is required, a low enough background noise level must be provided so that the instructor's voice may be heard throughout the room.

The usual source of high back-

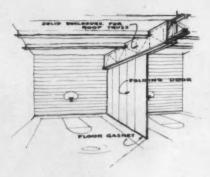
ground noise in gymnasiums is the mechanical system. For this reason, the standard practice of suspending unit heating and ventilating equipment from the roof should be avoided. Wherever possible, a remote location should be selected for the fan room, and acoustical treatment in the ductwork should be provided to permit a low level of background noise.

If the gymnasium is to be used for spectator sports and assemblies, it is important that a high quality, sound amplification system be installed. The energy such a system would reflect from the remote wall surfaces may be reduced either by making the wall surfaces absorptive and/or by selecting the loudspeaker equipment from a group of high quality, highly direc-

tional units to direct energy only toward the sound-absorbing audience.

If a stage area is established for the gymnasium, it is possible to install a single, central loudspeaker system for speech reinforcement and for announcements at basketball games. However, if a gymnasium is strictly an instruction space, it is possible to provide good results for announcements, reproduction of recorded material, and, if the circuity is carefully designed, even reproduction of live speech with a distributed array of loudspeakers suspended from the ceiling. In either case, it is good to get the advice of a trained engineer regarding the installation of the sound system in the gymnasium as well as in the auditorium.

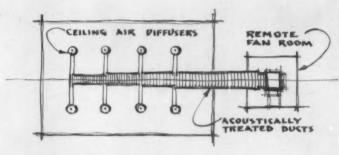
Dividing the gymnasium into two



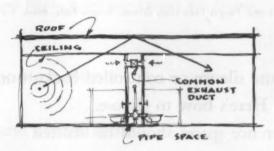
DIVIDING PARTITION in gymnasium should have a solid wall enclosing the truss and a floor gasket to prevent the transmission of sound.

REMOTE FAN ROOM with acoustical treatment in the ductwork provides a low level of background noise in the gymnasium.

LARGE HOLES in common pipe space, common ductwork, and thin ceilings may lead to embarrassing cross talk in the toilet rooms.



PLAN OF GYM



DANGER: "ACOUSTICAL ISOLATION IS THEY AS GOOD AS THE WEAKEST LINK"

instruction areas, one for boys and one for girls, does not call for as much isolation as between classrooms. However, it is necessary to provide for at least some simultaneous use. The isolation problem can be alleviated by installing a solid wood, gasketed, folding door. If the door is supported from an open truss at the roof, a solid wall should be built closing the truss to prevent the transmission of sound through the truss space, and the wall should be made of a dense, airtight material, such as gypsum wallboard, plaster or solid metal.

One should not attempt to use porous, lightweight material, such as acoustic tile. Unfortunately, many existing buildings already have installed extremely lightweight door constructions which place a small structural load on the roof truss. One cannot expect to achieve satisfactory results with such doors. However, blanking off the truss and sealing as many openings as possible can reduce interference between simultaneous classes.

The acoustical environment in swimming pools should be essentially the same as that provided in gymnasiums. The additional complication of a humid atmosphere with a chlorine content reduces the choice of sound-absorbing material but does not eliminate the necessity for its installation. In fact, in the swimming pool, safety alone requires that the instructor be able to hear each student and not be buried in the jumble of sound so common in the untreated swimming pool.

There are smaller, specialized instructional areas that also may provide acoustical problems in school design. For example, rhythm or dance classes may introduce large amounts of vibratory energy into the structural frame of the building; this may be readily transmitted to the other more critical areas, unless consideration has been given to reducing this transmitted energy.

The problems of noise transmission out of locker rooms should not be ignored. Between shower rooms, of course, no speaking tubes in the ventilation system should be allowed. Large holes for pipes in common connections in the pipe chase between boys and girls toilet rooms may lead to embarrassing cross talk.

(Continued on Next Page)

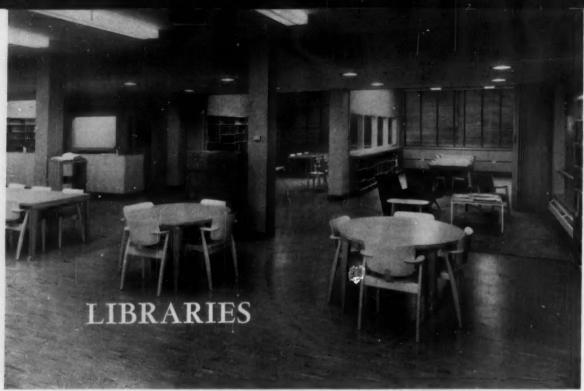


Photo by Oxley & Sons Studio, Fergus Falls, Minn.

Library, Fergus Falls High School, Fergus Falls, Minn. Architects: Cerny Associates Inc., St. Paul, Minn.

Absolute silence or controlled background level? Here's how to choose. Conference spaces should be isolated

LIBRARY above has over-all ceiling, sound-absorbing treatment, also segregated discussion-conference areas. Flexible doors to the big space provide satisfactory isolation if sealed carefully and level of talking on both sides is not too loud. Note solid barrier with fixed glass between discussion-conference rooms.

THE LIBRARY is a traditional area of quiet. There is a wide-spread feeling that the library should be so quiet that the slightest sounds from foot moving, page turning, and so forth would be audible throughout the entire space. Some thought about this tells us, however, that the library should not be too quiet but should have some background noise, loud enough to mask out distracting and almoying small sounds.

Thus, the library should provide a space that is quiet enough to concentrate in, but not so quiet that every small sound becomes distracting. A low, continuous background noise level from the ventilating equipment may be tolerated in the library to reduce the noise reduction required from the walls.

Reading rooms should either be treated with a full acoustic tile ceiling or carpeted for the required reverberation control. Carpeting has the advantage of reducing chair scraping and footfall noises, but it may lead to maintenance problems. Normal precautions should be taken to prevent the transmission of noise from immediately surrounding areas.

Small subdivisions of the library used for conferences, individual study, tutoring and the like, should be carefully isolated from one another and from the reading room. Full height partitions are mandatory, and doors should be of solid wood,

fully gasketed on all four sides. This, of course, requires that separate air supplies be provided for these smaller spaces.

If the library contains a recordlending department and provision is made for listening to records within the library, the best isolation method is to provide for earphone-listening only. If loudspeaker playback is mandatory, isolation similar to that recommended for the music department is required.

To further reduce intruding noise into the library, it is recommended that the librarian be provided with a separate work space to contain all the typewriters, duplicating machines, and so forth, necessary in his work. This office may require windows for supervision, which should be of at least two layers of ¼ inch plate glass separated by a minimum of a 4 inch air space.



Photo by Bill Hedrich, Hedrich-Blessing, Chicago

Swimming Pool, Proviso West High School, Hillside, Ill. Architects: Perkins & Will, Chicago

Good planning arrests most noise at its source. Noise control is a joint responsibility of administrators and consultants

SWIMMING POOL treatment is "must" for both noise control and safety. In pool above efficient soundabsorbing treatment was obtained by over-all suspended ceiling treatment of what appears to be perforated corrugated aluminum with glass fiber above. Side bleachers provide breakup of large areas of what otherwise would be parallel wall surface and eliminate side wall "flutter" (i.e. repetition of sound energy between hard parallel walls). Ceiling treatment alone is not sufficient to control flutter, since reflected sound is "contained" within parallel walls.

THERE are other spaces that do not normally suggest "acoustical" problems in a school. These are the mechanical equipment rooms, boiler room, fan rooms, and so forth, which may contain fans, pumps, relays, transformers and the like. However,

such sources of sound can give rise to excessively high background noise levels in classrooms, teaching areas, and offices, as well as in auditoriums and music rooms. The noise may be carried through ducts, walls, ceilings or floors, or in the structure.

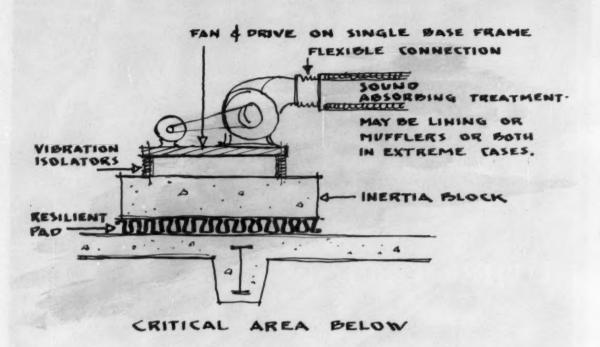
In planning a new school, it should be remembered that these noise sources exist. They can be controlled in the following ways: (1) isolating all vibrating equipment from the structure by resilient materials to reduce the structure-borne transmission of sound; (2) acoustically treating all air-borne paths for mechanical noise, and (3) providing remote locations from critical areas.

It is within these areas, as well as those in the music department and auditorium, where qualified, professional assistance is strongly recommended in the design process from site selection to finished building.

Administrative Areas. The isolation required for the secretarial area is easily provided by normal construction. However, in the administration wing there are offices which require more than usual isolation, such as interview rooms, counseling areas, principal's offices, medical rooms, and so forth. Teachers lounges and conference spaces must be well isolated from the casual student listener, who may be waiting outside or passing in the corridor.

One objectionable characteristic that is encountered frequently in small interview rooms is the repeated reflection of sound energy between hard, parallel walls. This problem may be reduced or eliminated by splaying the walls, or installing tilted tackboards, display units, or other elements to reduce the over-all parallelism of walls.

It is often wise to locate noisy of-



WAYS to stop noises where they start in the mechanical equipment room: Use resilient pads, inertia blocks, vibration isolators, flexible connections, acoustical duct linings.

fice equipment, such as the duplicating machine, in a small closet with a heavy door and sound-absorbing walls and ceiling to reduce over-all noise levels in the administrative area.

Comments and Conclusions. From the foregoing discussion it may be realized that good hearing conditions are an important part of the learning process. These conditions may be included readily (in most instances at little or no additional cost) in new school design by recognizing the need for adequate loudness, low background noise level, avoidance of echoes, and control of reverberation time.

There are areas where some common misconceptions may lead to trouble. Remember always that sound-absorbing material is light-weight, porous and generally transparent to sound, and will have little effect on the sound transmitted from one space to another. Isolation is afforded by massive, airtight construction.

There are countless sound reproduction systems installed in auditoriums and gymnasiums which are never used because they did not work upon installation. This is partially the responsibility of the individuals who purchased them and partially the responsibility of those who sold them. Most school systems require acceptance of the lowest bidder

on any phase of school construction. These rules do not prohibit the writing of tight specifications.

In terms of long-term economy, freedom from maintenance, and failure, it is extremely important that such specifications not only indicate a minimum quality of equipment, but also indicate a minimum quality of workmanship and require guarantees to assure these items are achieved.

Many salesmen will attempt to sell mechanical equipment on the basis that it is quiet. In general, most mechanical equipment makes a noise proportional to the amount of work the equipment is doing. Thus, if a fan moves a certain volume of air, it will require a certain horsepower and will produce a certain noise level.

The major job of noise control should be taken care of in the overall planning stage; it is a joint function of the educator, architect, mechanical engineer, acoustical consultant, and the building committee. This planning for noise control relates similar activities and separates noisy areas from quiet ones, both vertically and horizontally. This procedure can add great architectural strength to the usual planning approaches. Sophisticated uses of buffer spaces, such as corridors, small lobbies, transition areas, and the like, can add variety and more utility to our schools.

- LLOYD J. WILLIAMS



Photo by Infinity Inc., Minneapolis

CORRIDOR of Susan B. Anthony Junior High School in Minneapolis (above) shows a ceiling with effective sound-absorbing treatment (fissured, mineral, acoustical tile). This is important for avoiding corridor "reverberation chambers" and "speaking tubes." Architects: Cerny Associates Inc., St. Paul.

CAFETERIA at Fergus Falls High School (upper right photo) shows a common but useful sound-absorbing treatment of ceiling in a noise area. Cushioned "gliders" on the chairs and table legs help to minimize noise from the movement of furniture. Architects: Cerny Associates Inc.

SWIMMING POOL at Rome Free Academy shows effective use of freely suspended sound-absorbing panels controlling activity noise. Panels are constructed of perforated asbestos cement products with glass fiber above, and are used as strong decorative element. Sound-absorbing treatment of pools often is difficult to obtain because of moisture and humidity problems. Here problem is solved by "free" ventilation above and around panels. Acoustical treatment of pools is necessary safety measure. Cries for help are nearly impossible to hear in excessively reverberant pool. Architects: Perkins & Will, Chicago.





Joseph W. Molitor photo

BOLT BERANEK AND NEWMAN INC. were consulting engineers on acoustics for the following schools shown photographically in this study: Proviso West High School, Hillside, Ill.; Evanston Township High School, Evanston, Ill.; East High School, Aurora, Ill.; Kiva, Michigan State University; Susan B. Anthony Junior High School, Minneapolis; Rome Free Academy, Rome, N. Y.; Heathcote School, Scarsdale, N. Y.

Acoustics in Building

How To
Select and
Use
the Most
Suitable
Materials
and
Structural
Systems

SCHOOL architects, administrators and business officials constantly are giving increasing emphasis to acoustical environment and methods, and the materials for acoustical control.

Acoustics — like lighting, color and temperature — can contribute to, or detract from, the learning process in almost direct proportion to the attention it receives in programing, planning and design.

The emphasis on acoustics has been accelerated greatly by changing trends in teaching methods and in the planning of educational facilities. Manufacturers of building materials and educational equipment are meeting the problems raised by these trends.

Factors contributing to the heightened interest in acoustics in schools include:

The Audio-Visual Communications Revolution. The National Defense Education Act has served as catalyst, accelerating instructional use of television, films, magnetic recordings, teaching machines, and similar devices, including language laboratories.

The Demand for Flexibility. The hard-won accepted standards of 25 to 30 students per classroom are rapidly yielding to a whole range of new group sizes — from large groups of 100 or more (for feature films and lecture demonstrations) down to seminar groups of two to six students, or even an individual student library carrel or language laboratory booth. Faced with the need for efficient

utilization of all types of special spaces, administrators and business managers are demonstrating renewed interest in both multipurpose rooms and divisible rooms.

Since weight and airtightness are essential to preventing the transmission of excessive sound (see page 96), manufacturers of folding and movable partition systems have been forced to make giant technological strides to overcome what seem to be inherent problems of portability. And they are making progress.

Awareness of Environment. The current revolution in contemporary school design is now entering its twentieth year. In all probability, no single type of structure has received such intensive study as the school. The general public as well as the members of the teaching profession have responded increasingly to the importance of the classroom environment in the educational process.

As acoustic control has become almost universal in offices and stores, parents have come to accept acoustical treatment as an important factor in the school's over-all environment — along with good design, good lighting, good vision, and thermal comfort.

External Noise Problems. The jet age in both military and commercial air transport has obviously contributed to a reappraisal of the acoustics problem, as well as air conditioning, in metropolitan school buildings. The desire to limit external noise may have an important bearing on struc-

Materials and Equipment

tural and mechanical specifications of the building, in addition to the selection of acoustical materials.

A Tour Guide for Planners. In this staff-written report - in effect a semipopular appendix to Mr. Williams' article, page 96 - the editors of The NATION'S SCHOOLS will take administrators, business officials, and architects on a guided tour of current developments in acoustical materials and methods. Our objective is not to make acoustical engineers of school people, but to provide readers with facts on which to base their own recommendations and decisions in the many areas in which acoustical control may affect school building programing, planning and design.

A COUSTICS and acoustical materials are virtually synonymous to the layman.

Actually, every construction material serves as both a barrier to and an avenue for sound transmission. And every exposed surface within the classroom may be considered primarily as a reflector or as an absorber of sound.

Increasingly during the last 20 years, applied sound-absorbing materials have played an important part in the design of classrooms and other programed spaces. The 16 producers of architectural acoustical materials, who are members of the Acoustical Materials Association, currently make more than 180 types of special products for sound control.

Because acoustical treatment is an important environmental and economic consideration in both new school construction and modernization, The NATION'S SCHOOLS has asked the acoustical producers to summarize the information essential to school officials and architects.

THE VIEWPOINT of the acoustical materials industry is summarized in an interview by the editors of The Nation's Schools with R. W. Boltz, technical secretary, Acoustical Materials Association, New York City. Questions asked Mr. Boltz and his replies follow:

How do acoustical materials work?

Most sound-absorbing materials are efficient because they are highly porous. The amount of absorption of porous material depends on the thickness, the size of the pores, the ratio of pore volume to total volume, and the frequency of sound. Air particles, moving in and out of the pores, meet resistance and the sound energy is dissipated as heat. For the pores of a material to absorb sound effectively, they must communicate with each other and with the surface of the material. Absorption increases up to a point with the degree of porosity as measured by the rate at which air can be forced through. If the size of the pore is increased beyond a certain point, producing a loose-textured material, absorption decreases.

What factors are essential for efficient acoustical installation?

To be fully successful, an acoustical ceiling must be planned for maximum value, appearance and utility. This generally involves the following factors: right material, proper lighting, correct installation method, and proper time at which to install the ceiling.

How many groups of acoustical materials are there?

There are two groups of acoustical materials: prefabricated units and job-assembled units. These materials vary considerably in type and appearance, with varying shades of finishes and colors. Performance after installation, however, can be relied upon to match that indicated by the standard test data on which they are rated. Both types can be produced in large quantities with uniform absorptive characteristics and matching appearance through control of density, thickness, dimensions and finishes during the manufacturing process.

What are assembled units?

Assembled units include combinations of sound-absorbing elements (such as rockwool and glass fiber blankets) in pads or blankets installed over acoustically transparent facings, most of which are perforated. These are represented by metal pan tiles, perforated corrugated metal panels, and perforated cement asbestos boards. Some variation in the over-all absorption, and absorption at different frequencies, is obtained with differing thicknesses and types of the sound-absorbing elements and the spacing between the elements.

What are prefabricated units?

Prefabricated units are illustrated by the many differently surfaced acoustical tiles, in sizes ranging from 12 by 12 inches to 24 by 24 inches and by the "lay-in" boards of nominal 24 by 24 inches to 48 by 48 inches for use in exposed tee systems.

How many types of acoustical materials are there?

There are about 186 different kinds of acoustical materials listed in the latest bulletin of the Acoustical Materials Association. Major types by composition are those made of cellulose fibers and of mineral fibers. Glass-fiber products form a major subdivision of the mineral fiber type. Perforated metal and perforated cement asbestos facings also may be considered separate classes.

What are cellulose fiber tiles?

Cellulose fiber products are made from both sugar cane fibers (bagasse) and wood fibers. After fabrication, there are minute interstices between the fibers throughout the tile. These tiny voids, reached by the perforations, give the tile its sound-absorbing qualities. Tiles can be made termite, fungi and dry-rot proof by special manufacturing processes.

One of the earliest materials to be used for sound absorption, fiber tiles are available in a large variety of sizes, thicknesses and efficiencies. Paint developments of recent years permit manufacture of tile with a more flame resistant finish than was available initially. Variations in appearance are achieved by varying the size, pattern and spacing of perforations, and by varying the size, shape and color of the tiles.

Would you describe mineral tiles?

Mineral wool, the general component of mineral tiles, is felted with the addition of a suitable binder, added to provide strength and toughness. Mineral fiber tiles are available with fissured surfaces or with perforated surfaces. Sound is dissipated

by friction in the minute interstices between the fibers, exposed by the fissures or perforations. Mineral tiles contribute no fuel to the fire and usually are considered an incombustible material. They are used in all areas where building codes require such material. Mineral tiles are manufactured in a variety of sizes, thicknesses and efficiencies.

What are the uses for perforated metal tiles?

The metal-type acoustical material consists of perforated metal pans or panels with supporting flanges which provide structural strength, and a mineral-wool pad which absorbs sound. This tile is made of light-gauge steel or aluminum, with perforations to permit sound to reach the pad.

It usually has a baked-white enamel finish which is easy to wash and maintain.

Appearance of the tile is varied by changes in size and pattern of the perforations. It often is used in installations where it can be taken down and moved to other areas. It frequently is used in commercial and institutional buildings, particularly where long-range economy of maintenance is important. It is adaptable to air conditioning systems where special air-flow channels can be installed that allow cool air to pass through the perforations into the room below.

Where high humidity or condensation exists, the metal used for this tile should be either of electro-galvanized steel or aluminum.



What are glass fiber tiles?

Glass fibers are mineral fibers combined with a small percentage of a stable binding agent, and compressed and bonded into board form. Glass fiber tiles have an incombustible rating, and are found in installations that require flame resistance.

Where is perforated cement asbestos material used?

Perforated cement asbestos is used as a facing over sound-absorbing mineral wool blankets or pads. Because of its resistance to moisture, it is especially useful in installations in swimming pool areas and cafeteria kitchens. It also is popular for use in radio and television studios, concert halls, and auditoriums. It has an incombustible rating.

How is an N.R.C. rating used to choose an acoustical material?

When specifying the acoustical material to be used, the Noise Reduction Coefficient (N.R.C.) listed should be consulted. These ratings are intended to serve as a guide to show the relative performance of a given acoustical material at various frequencies. The coefficient indicates the percentage of the energy of a sound wave absorbed by the material when the sound wave strikes it. Because the absorption coefficient of every material varies with its frequency, materials usually are tested at six frequencies at octave intervals between 125 to 4000 cycles per sec-

In this connection, it is advisable when dealing with N.R.C. ratings to MIXED MATERIALS are used in the composition of the ceiling of the Heathcote School in Scarsdale, N.Y. Acoustical materials used in this classroom are exposed wood deck (background), absorbent acoustical tile (foreground), and absorbent tackboard walls (right). Architects: Perkins & Will, Chicago and White Plains, N.Y.

express the specification in terms of an efficiency range.* For example, when an acoustical material with an approximate efficiency of 0.70 is desired, the specifications should call for a material with an N.R.C. of 0.65 to 0.75. Limiting the efficiency designation to precisely 0.70 could eliminate those materials which could perform the noise quieting job just as well, but which have other needed characteristics.

Is the N.R.C. the only basis for selection?

Useful as the noise quieting efficiency is, it should rarely be the sole basis for selection of an acoustical material. Other features in any given situation should be considered.

How do acoustical materials affect the transmission of sound?

Sound-absorbing materials do a good job in controlling the buildup of noise within a room and the spread of noise throughout the building (through open doorways and hallways). But the transmission of noise through ceilings and walls to adjoining rooms is another problem. Acoustical materials generally are porous, to absorb sound, and are not necessarily designed to prevent noise transmission through the material. Some acoustical tiles are dense on the back, or are sealed on the back to improve their effectiveness as sound barriers.

How do acoustical materials fit into building decor?

Acoustical materials are an integral part of modern building decor and, therefore, an important consideration in specifications. A wide variety of surface designs are offered by the acoustical materials industry. When

^{*}A completely deadened acoustical test chamber would have a theoretical Noise Reduction Coefficient of 1.0.—BETTER

selecting the material, the specifier must keep the material in mind. For reception rooms, lobbies and so forth, which require more emphasis on appearance, materials with fissured or textured surfaces are preferred.

How does the cost factor figure?

Cost is, of course, a consideration with acoustical materials, as it is in most building processes. But it is good to remember that the best dollar value is not necessarily found in the material with the lowest initial cost. This is especially so with such features as fire safety, continuing effective sound reduction, maintenance and light reflection.

What are the maintenance problems?

Ceiling and wall maintenance requirements merit special attention in some buildings and in limited areas of others. Particular care in selecting materials is necessary. Sanitation requirements in the school's health suite and kitchen and resistance to chemical fumes in laboratories are examples. All acoustical products can be spray painted. Tile with 1/8 inch and larger diameter perforations can be brush-painted without fear of closing the holes.

How does the A.M.A. rate the fire resistant qualities of acoustical materials?

Most of the acoustical materials in use today have been tested for flame resistance by the A.M.A.'s official laboratory. The indiscriminate use of terms such as fireproof, fire resistant, flameproof and so forth in specifications has created confusion. By adopting the following numerical designation for various degrees of flame resistance, as determined by a recognized test method, the A.M.A. hopes to aid the architect in specifying the type of material required: (1) incombustible, (2) fire retardant, (3) slow burning, and (4) combustible.

What are some other points to consider in specifying acoustical materials?

There are many acoustical materials available today because no one material will solve every architectural problem. Each has its own characteristics. Except where special noise problems exist or where efficiency is a critical factor, these characteristics should be considered: appearance, light reflection, thickness, resistance to moisture, maintenance, insulation value, installation methods, flame resistance, and cost.

There are so many variables involved in any particular job that it is incorrect to say that any one type is best suited for the job. The main problem or goal must be determined. Then the material that performs best all-around can be chosen.

Is there an ideal acoustical environment?

Yes. It is one where there is a sufficiently low level of background noise, where the sounds to be heard are loud enough, and where the successive syllables (or other sounds) are not hidden or masked by those which preceded. This doesn't mean that all background noise should be eliminated, or that a better condition would prevail if there were no background noise. A certain amount of more or less steady noise masks many sounds which would be disturbing individually; in some cases background noise actually is generated to provide conversational privacy.

Should all rooms in a school building be acoustically treated?

With the exception of storerooms and possibly lavatories and locker rooms, all rooms which regularly will house students and staff should have controlled acoustics.

Are there any restrictions to the shape and size of classrooms for acoustical reasons?

Assuming that the emphasis is on the word, classroom, in its generally accepted meaning, the answer is a qualified No. Use of a curved roof or a round room would not be recommended because these are likely to focus the sound waves into a central area. A full cure for this type of problem with sound-absorbing materials would be almost impossible.

In your opinion, can too much soundabsorbing material be used in classrooms?

Theoretically, Yes; practically, No. Complex and expensive anechoic surfaces (echo-free or completely non-reflective) would not be used in schools, and standard ceiling or ceiling and partial wall treatments plus the absorption provided by the occupants' clothing and room furnishings do not deaden a classroom too much, according to studies reported to date.

Should all rooms receive identical or comparable treatment?

Not if the use of the rooms is for different purposes. Where a room is used for several purposes, e.g. the multipurpose gymnasium or cafeteria, or the band and choral practice rooms, a decision has to be made as to which use should dominate the acoustical planning, or whether compromise solutions or supplementary controls may be required.

In your judgment, should acoustical materials be installed in particular areas of a room?

In large halls and auditoriums where lecturing or other programing originates from a fixed location, room shape and positioning of acoustical materials are used to achieve optimum listening conditions. In classrooms this is not necessary because distances are short enough that direct speech (as contrasted to that reflected from the room boundaries) is of sufficient loudness.

What criteria exist for the acoustical design of classrooms?

The most widely known is referred to as reverberation time; this describes the rate at which sound decays in a room. A second is the percentage articulation which measures the percentage of syllables which are heard. The consensus of acoustical studies reported demonstrates that percentage articulation improves as reverberation time decreases, in rooms of classroom size.

How does acoustical treatment stop noise?

Sound-absorbing materials do not "stop" noise. The sounds present in a room are those coming directly from the source and those which reach the auditor after one or more reflections from the room boundaries. The total sound level is lowered by the faster removal of the reflected sound energy achieved by acoustical materials.

Although acoustical materials are generally porous to facilitate sound absorption, the sound insulation value has been increased noticeably in two ways. One is a fabricating method that produces a tile of greater density at the back. The second is sealing the back, which increases the tile's resistance to sound transmission to useful proportions. The A.M.A. currently is conducting studies in this area.

Acoustical consultants have suggested that a "hard," sound-reflecting center portion of the ceiling may be found in the best classrooms. Is such a reflective surface necessary?

We know of no studies supporting the validity of this theory in general classroom design. There is general agreement, of course, on the importance of reflected sound, as well as direct sound in large assembly areas.

Distances are short in classrooms, so specific attention to reinforcing direct sound with reflected sound is not needed. Classrooms need acoustical treatment to quickly remove noises intruding from the outside, and the scuffling of shoes, desks, books and other noisemakers inside the room.

Quick removal of unwanted noise helps maintain suitable study condi-



Photo by Hube Henry, Hedrich-Blessing, Chicago

EXPOSED ROOF DECKING of cement fiber is used in Schafer Elementary School, Villa Park, III. Architect:
Brooks Buderus, Park Ridge, III.

tions and helps prevent the tension and fraying of nerves that occur in highly reverberant rooms. Acoustical treatment creates an acoustical environment of adequately controlled reverberation, in which the teacher and student may be heard clearly.

How about the cost of a hard, soundreflecting panel in the center of the classroom ceiling?

Obviously, it is generally more economical to use a single material throughout the ceiling than to mix materials. The latter implies mixing of trades, always contributing to higher costs. There have been some interesting applications, however, in multistory, reinforced concrete construction. Some architects have left the teacher's area of the ceiling bare, compensating for the increased reverberation by using acoustical tile as tackboard surface on the back wall.

Absorbent, porous materials convert sound energy to heat. Nearly 200 products are available for acoustical treatment. Here is a study of

Limitations, Costs and Maintenance Factors

Although laymen consider acoustic tile and acoustics almost synonymous, other materials and technics are applied in various school situations. Among them are:

Lath and Plaster. Used widely in auditoriums, large lecture halls, and other spaces, lath and plaster systems offer the architect great freedom in designing ceilings that combine good acoustics and illumination with fire safety and visual esthetics. When a reflective surface is desired, a hard plaster is used.

Acoustical Plasters. Development of special acoustical plasters preceded acoustical tiles by several years, and the gypsum and lime plastering materials industries have carried out continuing research in the science as well as in cost-cutting application methods.

Where acoustical design requires use of both reflective and absorptive surfaces in the same ceiling, plaster gives the architect great design freedom.

Acoustical plasters are of three basically different types, according to Lloyd Yaeger, secretary, the Gypsum Association, Chicago.

All three types have approximately the same noise reduction coefficient: 0.55 to 0.60 (slightly lower than the most absorptive acoustical tiles). The noise reduction coefficient varies with the type of plaster base structure on which the plaster is applied.

Clay base acoustical plaster is one of the most economical acoustical ceiling surfaces. It is particularly adaptable to large unbroken ceiling areas where an attractive texture may be attained economically by spray application. It has a fairly soft surface that will be marred by knocks. Redecoration requires, preferably, the

spraying of another fine layer of the same material, or spray painting. The latter affects acoustical performance of the material to a small degree. Clay base acoustical plaster may be sprayed directly to monolithic concrete, making it particularly economical for multistory classroom building construction.

Gypsum base acoustical plaster must be hand-applied with a fine trowel or float, but it offers maintenance and repainting advantages. It may be vacuum cleaned, or painted with breather-type water-base paint without appreciable loss of acoustical properties. Designed for use on ceilings and wall areas not subject to contact, the gypsum base acoustical plaster should not be used where exposed to excessive moisture. This product is offered in several pastel tones in addition to white.

Lime base acoustical plaster has a very white color, and may be considered midway between the clay base and gypsum base plasters in ease of application and initial cost. Acoustical effectiveness may be increased by stippling or stipple-perforating. The product may be painted, and is more durable than the other two types offered by the gypsum companies. The manufacturers do not recommend use of any acoustical plasters over radiant heating panels.

Multi-Use Metal Ceilings. A logical extension of suspended acoustical tile construction has been the recent development of a number of ceiling systems that combine acoustical, lighting, heating, cooling and ventilating functions. These systems are finding their way into a variety of school applications.

Structural Acoustic Materials. The trend to increasing prefabrication of large structural components has led to development of a number of structural roof products that combine structural, acoustical and thermal properties. These products are often seen in gymnasiums, shops and classrooms in low-cost modular school buildings.

In the search for economy and utility in school construction, architects have turned increasingly to dualpurpose materials and off-site fabrication of larger components. A number of roof structural materials have been employed increasingly with exposed under-surfaces, particularly in gymnasiums, shops and economy modular type schools. Principal types include insulating roof decking either of cellulose fiber or fiber-cement composition, insulating form board as a base for poured gypsum roof decking, and various forms of exposed lumber construction.

Fiber insulating roof decking combined with laminated wood beam construction has accomplished savings of up to 50 per cent, compared to competitive roof structures, according to Robert A. LaCosse, technical director, Insulation Board Institute, Chicago. As used in the familiar post and beam, or laminated arch construction, insulating roof deck is generally produced in modular panels 8 feet long, 2 feet wide, and 3 inches thick. The panels incorporate the structural roof, complete insulation (both thermal and acoustic), and the finished, inside ceiling. It should be remembered that the combustibility of some of these materials may affect insurance rates.

Since insulating roof decking is usually composed of laminations of structural and acoustical fiber materials, the finished surfaces usually correspond roughly with fiber ceiling tiles. The perforated or fissured types of decking generally have noise reduction co-efficients ranging up to 70 per cent. Illumination, maintenance, painting and flame spread resistant qualities are comparable to those in fiber acoustical tiles. Smudges may be removed with artgum erasers, dust with a vacuum cleaner, stubborn dirt with benzene or denatured alcohol. Many firms make washable tiles. Only so-called "nonbridging" paints should be used. Some insulating roof deckings and fiber acoustical tiles may be repainted many times without appreciable dilution of acoustical properties.

Cement Fiber Deckings

Within the last 10 years cement fiber acoustic-thermal insulating roof deckings have become an important factor in school and industrial construction. Like the fiber insulating tiles and roof deckings, the cementfiber deckings are essentially byproducts of the wood, paper and sugar cane processing industries. The boards are generally made of waste wood chips, excelsior and waste sugar cane fibers. These materials are bonded with various types of mineral cements that enhance their resistance to combustion, without interfering with the porosity that contributes to high sound absorption. Several of the principal manufacturers report that their products have been tested with average noise reduction coefficients (for the middle frequencies) of 0.65 for 2 inch decking, 0.70 to 0.75 for 21/2 inch decking, and 0.80 and higher for 3 inch decking. Thermal insulation properties are excellent. Light reflection may be slightly lower than other acoustical materials because of the rough texture. Maintenance requirements and painting are virtually identical with those for acoustical tiles and deckings.

The cement-fiber decks have greater mass than other forms of prefabricated roof decks, which gives them a relatively high effectiveness against transmission of unwanted exterior sounds, such as airplane engines. Their relatively high weight is a factor in cost. Distribution is generally economical only within 500 to 600 miles of the principal plants, which are located relatively close to the largest metropolitan areas.

Another type is a light gauge structural metal roof panel that has a perforated bottom surface. Soundabsorbing elements that are inserted in the panel increase the absorption by the panel.

Roof Form Boards

Poured gypsum roof decking is used widely for flat-roofed school and industrial structures of all types, in combination with structural gypsum form boards and structural-insulating form boards of felted mineral wool and glass fibers. This type of construction is found frequently in large gymnasiums and shops or in the large one-story "loft" type of school

construction, particularly in so-called "comprehensive" high schools.

The glass fiber and mineral wool form boards are produced in the same large modules as fiber and cement-fiber decking.

Acoustical sound-absorption ratings are among the very highest of any materials. Noise reduction coefficients for glass fiber deckings are approximately 0.75 for 1 inch, and 0.90 for 1½ inch and 2 inch boards. Thermal insulating qualities are good. The construction has very low combustibility.

Multipurpose Pan Ceilings

Latest trend in ceiling construction in office buildings and flexibly planned schools are the multi-purpose metal pan ceilings.

These systems, introduced within the last 10 years, circulate either hot water for panel or "radiant" heating, or chilled water for panel cooling, in grids of steel tubing "furred down" from structural ceilings in suspension methods familiar in plaster and acoustical tile systems.

The finished surface is composed of snap-in enameled aluminum perforated panels, which have high thermal conductivity, helping to radiate heat in the winter, and absorb heat in the air conditioning season. Recessed ceiling lights and unperforated reflective panels may be incorporated in the system. High thermal insulating value and high sound absorption are provided by bonded glass fiber blankets laid above the metal pans. These generally have noise reduction coefficients of 0.80 for 11/2 inch thick blanket, 0.85 for 2 inch blanket, and 0.90 for 3 inch blanket. Provisions may be made for ventilation through diffusers, or through uncovered ventilating panels.

A recent variation in this system has been the development of multipurpose recessed lighting fixtures that serve as heat radiators or "blotters" in the heating and cooling cycles. Acoustical pan construction factors are comparable.

Suspended metal pan ceilings offer relatively low maintenance cost over the years and a high degree of acoustical absorption and thermal comfort. As in all metal ceilings, sound passes through the material and must be trapped above the ceiling or otherwise diverted to prevent transmission.

Still another variation in the allpurpose ceiling field has been marketed by one of the major producers of acoustical and plaster materials. This is a suspended ceiling system of slotted mineral acoustic tile, backed with foil. Heating, cooling and ventilation air is forced down from a plenum over the ceiling. Air distribution may be balanced by opening or sealing off groups of slots. The mineral tile has medium high soundabsorption properties, which may be augmented by spraying a highly incombustible gypsum or lime and perlite acoustical plaster on the under side of the concrete floor or roof structure

Wall Systems in General

Absorption of sound is only one part of the acoustical story important to schoolhouse planning.

Faced with an increasing use of audio-visual devices and with new demands for flexible utilization of spaces, schoolhouse planners have demonstrated increasing interest in the problem of noise transmission between rooms.

Resistance to sound transmission may well become a cardinal specification in selecting both permanent and movable partition systems.

Manufacturers of building materials and equipment have recognized the noise stopping factor and have demonstrated great ingenuity in developing new products to meet the need.

The lead article in this administration study has outlined design factors that must be considered in preventing noise transmission. These include sealing "leaks," such as those occurring around doors, above suspended ceilings, and through ventilating grilles and ducts.

Contrary to lay opinion, acoustical absorbents, such as typical light-weight acoustical tiles and glass fiber thermal insulating blankets, are not effective acoustical insulators. Efficient sound insulation depends primarily on two qualities: (Cont. p. 124)

REPRINTS of this 32 page study are available at 25 cents each in orders of 200 or more and 30 cents each in smaller orders. To facilitate handling, payment should accompany orders for less than 25.

1. Mass, or unit weight.

2. Limpness, or inelasticity.

Acoustically ideal, but impractical, would be a wall construction of wet leather filled with lead shot. Also effective as a sound barrier, but economically infeasible, would be interior partitions of three foot reinforced concrete.

With the broad range of materials and methods available, the architect can achieve almost any desired degree of sound isolation — at a price!

The degree of sound isolation required has never been determined categorically. Architects have used various standards, ranging from 35 to 45 decibels sound loss, in evaluating various partition systems. Obviously, the requirements for privacy vary considerably, as for example between offices in the counseling suite and between the metalworking and woodworking shops. Unquestionably, the educational program that envisions intensive use of motion pictures, television and tape recordings calls for higher sound insulation standards than one that calls for maximum "cross pollination" between arts and

Dariel Fitzroy, architectural acoustical consultant on schools designed by John Lyon Reid and Associates, San Francisco, questions the necessity for an effective noise reduction factor of 40 to 45 decibels. "The degree of interception certainly is vitally important in the design and, most obviously, is fundamental from the viewpoint of economics," says Mr. Fitzroy.

Mr. Fitzroy reports that in several "loft" type high schools, conventionally prefabricated steel movable partitions have been used with success between classrooms and to separate classrooms from corridors.

"To the best of my knowledge," Mr. Fitzroy writes, "there has never been any complaint relative to insufficient sound separation between the classrooms in these schools during the five or six years they have been in use. If this is true, the noise reduction between the classrooms need not be more than 25 to 30 decibels."

Mr. Fitzroy also visited a number of Caudill, Rowlett & Scott high schools in Texas that employ partial partitions between classrooms and corridors, and between some classrooms. Over-all background noise levels ran as high as 67 decibels in some spaces with 15 to 20 classrooms.

Sound interception measurements for full partitions ranged from 12 to 25 decibels, and they have been estimated at 5 to 6 decibels for partial partitions.

Teachers and students could hear each other clearly, and Mr. Fitzroy reported that he could induce no teacher to admit that conflicting sound was bothersome, impeded teaching or learning, or even caused fatigue to either student or instructor.

Perkins & Will, architects-engineers, Chicago and White Plains, N.Y., have employed partial partitions between classrooms and corridors with varying degrees of success in schools in Idaho, Illinois, Michigan and South Dakota during the last 15 years. Contributing factors to the choice have been economy in ventilation and partition costs, as well as a desire for "educational unity," according to Lawrence B. Perkins, partner.

Some administrators have reported complete satisfaction with the open corridor partition. Individual teachers in other situations have expressed preference for the addition of at least a glass barrier above lockers. Mr. Perkins personally is interested in controlled background noise, including the possible teacher-controlled employment of "piped" background music in some learning situations, particularly in libraries, study halls, laboratories, family living sessions, and commercial practice sessions.

Permanent Wall Systems

In evaluating permanent partition systems, schoolhouse planners must consider a number of factors in addition to acoustical insulation. These include esthetics; the educational utility of the surfaces, such as tackboards and chalkboards; combustibility; over-all erection cost, and total weight.

Good acoustical and fire ratings are obtainable for such widely used interior partitions as exposed brick (4 inch face brick, well laid, may have a 45 decibel rating) and concrete block (4 inch block, with two coats of paint on each side, may have a 40 decibel rating).

These materials are particularly common in single story elementary schools. Their acoustical rating depends on their relatively high mass. However, the brick partition weighs about 40 lb. per square foot and the concrete block weighs about 30 lb. per square foot.

Architects have found they can save considerable weight in the overall structure by using lighter constructions in multistory classroom buildings.

Conventional wood stud, metal lath and plaster construction, has an average transmission loss of 39 decibels, but rates as combustible.

Substantially higher sound transmission and combustibility ratings may be obtained from a variety of steel stud, metal lath and plaster partition systems, according to Jack Fisher, managing director, Metal Lath Manufacturers Association, Cleveland.

A wall built of prefabricated steel studs, 24 inches on center, with % inch rib metal lath tied directly to both sides and % inch sanded gypsum plaster on both sides, has an average transmission loss of 46 decibels. This construction has a one-hour noncombustible fire rating. If the metal lath is isolated from the steel studs by resilient spring clips and ¼ inch pencil rods, the average transmission loss in decibels moves up to 55.

The average weight of this construction is 18 lb. per square foot. Cumulative weight savings in a multistory classroom block make this premium construction potentially one of the most economical, Mr. Fisher claims.

Architects use various tricks to reduce transmission, depending on the floor and ceiling construction. One is staggering wood or steel joists to avoid contact. Another is resting the entire wall structure on a wood or cork base.

Concrete Masonry

Typical concrete masonry partitions have average sound transmission losses ranging from 25 to 50 decibels, according to the National Concrete Masonry Association, Washington, D.C.

An unpainted 4 inch, lightweight block will have an average sound transmission loss of 30 decibels. This will be increased to 37 decibels by an effective sealing paint. An unpainted 4 inch, concrete block partition will have an average sound transmission loss of 40 decibels. An unpainted, or painted, 8 inch concrete block partition will have an average sound transmission loss of 50 decibels.

Concrete masonry cavity walls, covered with plaster, are particularly effective as major sound barriers,

such as those that may be required between band and chorus rooms, or band rooms and auditoriums.

A 7½ inch cavity partition (built of two 4 inch concrete block walls, with a 2 inch cavity, and ¾ inch of plaster on each face) will have an average sound transmission rating up to 53 decibels, while the same construction with a 4 inch hollow cavity will rate up to 56 decibels. Even higher ratings may be obtained with an 8 inch block and a 4 inch cavity, in those critical areas demanding maximum sound insulation.

Even the structural ceramic tile industry is making contributions to the acoustical picture. One of the most interesting developments has been a line of hollow, structural tile that is pierced on the glazed surface, with optional inserts of mineral or glass fiber wool in the first cavity behind the surface. This material may give added sound-absorption control where needed in kitchens, toilets and corridors.

Partitions and Draperies

Factors responsible for increasing

interest in "flexible," movable partitions have been outlined earlier in this study.

William W. Caudill of Caudill, Rowlett, Scott & Associates, Houston, Tex., has suggested three categories for movable partitions — those that may be changed from "hour-to-hour" by teachers and students; those that may be moved overnight or over the week end by maintenance personnel, and those that may be changed during the summer vacation and maintenance period by construction tradesmen. The latter category would include some of the relatively low-cost "dry wall" partition systems that might be considered expendable.

A partition of wood studding and % inch fir plywood, for example, is low cost and has a fair degree of salvage value when it is demounted and reerected. Such a construction is combustible and has a sound transmission loss rating of 25 decibels. The addition of % inch gypsum lath or plasterboard to this construction, as a base for the plywood tack surface, would increase the sound transmission loss rating to 38 decibels, with-

out materially affecting the reuse. This construction is still considered combustible.

One variation in this construction has been employed in the Villa Park, Ill., public schools by Architect Brooks Buderus of Park Ridge, Ill. Here a 2 by 2 inch wood stud has been faced with ¾ inch gypsum lath board and ¾ inch vinyl coated fiber insulation board on each side. The fiber insulation board serves as both an expendable tack surface and a sound absorbent. The over-all sound transmission rating has been estimated at approximately 40 decibels.

Both a high degree of overnight or week-end flexibility and a low weight are claimed for prefabricated movable partitions with metal skin and mineral core. This type of construction generally has received a sound transmission loss rating of 30 decibels, with a 25 decibel rating for steel or aluminum locking panels with a glass insert.

One of the pioneer manufacturers of movable metal partitions has concentrated on the development of completely sealed steel and mineral pan-

EXPENDABLE DRY WALL partition in Edward Schafer School, Villa Park, Ill., is of wood studding and gypsum

board with a tackboard surface. Architect: Brooks Buderus, Park Ridge, III.



Photo by Hube Henry. Hedrich-Blessing, Chicago

els, together with an integrated framing system that includes insulated posts, baseboards and headboards, and a high degree of sealing against leakage around elements. This type of construction has been tested in independent laboratories, which have established an average sound transmission loss of about 42 decibels, with a slightly higher rating of about 45 decibels in the speech range of 250 to 2000 c.p.s.

Highly significant improvements in resistance to sound transmission have been made by one of the pioneer manufacturers of accordion-type folding partitions. These may be changed between classes or during a class-

room period.

Early accordion partitions were generally given an average sound transmission rating of approximately 20 decibels (relatively transparent acoustically) which was a deterrent to use in many school situations.

This latest contribution from the folding door industry has an average sound transmission rating of 41.8 over the range from 354 to 4000 c.p.s., according to the manufacturer. The high noise reduction capability is achieved through lamination of 12 layers of material, including two layers of 24 gauge steel. Top and bottom edges of each face are doubly insulated.

Joints between units are sealed with foam rubber, while an ingenious suspension and floor sealing system contributes to over-all effectiveness.

Tests currently are being completed preceding the introduction this August of a highly flexible acoustical room divider that may be employed in heights up to 22 feet.

This new system is based on the devolpment of a fabric of synthetic fibers interwoven with a stranded lead wire for mass. Preliminary tests indicate an average sound transmission rating of about 38 decibels.

The same manufacturer has conducted field tests indicating that high quality carpeting may contribute greatly to deadening distracting sounds at the source — scraping desks, shuffling feet, and so forth — as well as contributing to the over-all acoustic and esthetic environment of the schoolroom, particularly in secondary schools.

Wood Complements

A judicious balance between soundabsorptive and sound-reflective materials is essential to obtaining an ideal acoustical environment, according to the National Lumber Manufacturers Association, Washington, D.C.

Large areas of wood paneling and wood flooring are particularly valuable at the platform end of music rooms and auditoriums. Here they help create an acoustically reverberant atmosphere in which all the members of a chorus or instrumental ensemble hear the other members, and which enhances projection of all vocal frequencies to the audience.

Thin wood paneling and thin plywood panels of appropriate size play a particularly useful role in balancing voice and orchestral accompaniment in music rooms and auditoriums. The thin plywood panels act as reflectors, reinforcing the vocal frequencies, while they absorb a substantial amount of low frequency energy generated by the bass orchestra and band instruments. The soundabsorption curves are almost exactly complementary to those of highly absorptive acoustical materials.

Wood framing may be combined with lath and plaster, dry wall gypsum wallboard, fiber wallboards, and plywood to produce a variety of relatively low-cost interior partition systems with almost any required degree of resistance to sound transmission, or sound absorption qualities, N.L.-M.A. holds. A staggered wood stud

construction, with opposing wall surfaces of fiberboard, gypsum wall-board or lath and plaster may have a sound transmission rating of up to 50 decibels.

Fire Rated Ceilings

An interesting recent development in acoustical treatments has been a suspended ceiling system with a 1-2- 3- 4-hour time design fire rating.

This system is based on a densely packed, mineral, acoustical tile fabricated in large, modular panels, with a unique tongue, groove and kerfed edge detail. The interlocking tile edges form a fire protective ceiling membrane, which effectively blocks passage of heat. The metal suspension members are designed to minimize buckling or twisting from the heat of a fire. Panels are removable for access to plumbing lines, air conditioning units, electrical conduits, and other concealed utilities. This product is one of the many new developments within the industry. Manufacturers of all types of acoustic tiles have made progress in improving the flame spread ratings of their products.

Prefinished foam glass blocks, which are more absorptive than most materials, are available for correction of acoustical problems in existing buildings or for new work. They are mounted in patches or a pattern and never over an entire wall or ceiling.

NO SINGLE SOLUTION

THE BROAD RANGE of acoustical tile and various other materials and technics indicates that there is no single all-purpose "school solution" to the acoustical problems in classrooms, corridors, assembly rooms, and other educational spaces.

Sound-absorption and reflective properties must be balanced with other qualities, including sound transmission, lighting and electrical distribution, flexibility, maintenance and over-all construction cost. Although tremendous progress has been made in new product development, particularly in off-site fabrication and modular coordination, the conventional materials producers have countered with continuing research and development, and a strong emphasis on low maintenance costs. The school administrator and business official must balance the various technical viewpoints of the architect, mechanical engineer, and acoustical consultant against his own educational and operating requirements.

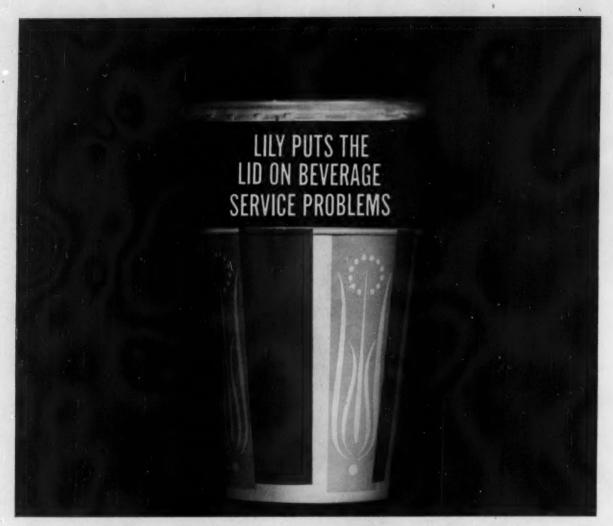


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New SoundLock metal acoustical ceilings eliminate annoying sound transmission. SoundLock is firesafe and <u>pupil-proof</u>—easily installed and costs less than conventional metal ceilings—requires virtually no maintenance—allows easy access to the plenum chamber—has an exclusive textured baked-enamel finish—and lasts the life of the building. No other acoustical ceiling gives you all these advantages. SoundLock is the only structural metal lay-in acoustical ceiling.

Want more information about SoundLock ceilings? Consult your architect or write the pioneer in sound transmission control...The Kemp Corporation, Dept. F-5, 124 South Woodward, Birmingham, Michigan.





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SCHOOL LUNCH

First Graders Are Happier When Food Is Served in Classrooms

MARTHA E. NELSON

Principal, Lansing Elementary School Ludlowville, N.Y.

THE lunch period is as important for learning experiences as any other period in the school program. For the school lunch program to be successful, its *philosophy* must be understood by all who participate in it.

The school principal, who is responsible for scheduling and general supervision of all activities in the building, plans the program with the assistance of the cafeteria manager and the teachers. Ideally, the cafeteria manager, who is a member of the faculty, not only plans the menu that provides a balanced diet but also helps the teachers in developing a program in health and nutrition.

The attitudes of the cafeteria workers are very important. The personnel should have a liking for children in order to create a happy and relaxed yet orderly atmosphere during the time the children are being served. A gay flower or clever seasonal arrangement that greets the pupils as they enter the cafeteria adds a touch of informality and beauty that is anticipated each day by the children.

The teacher's primary objective is to make this period a learning experience for all the children. Attractive menus may be distributed to the children two or three weeks in advance. Mothers may — and many do — plan the family dinner around the school lunch. In our own Lansing school, the children who are members of the elementary student council discuss the importance of having some rules and regulations when 500 children eat in a limited time.

Eat in Classrooms

In our centralized school the children come from all types of homes. The kindergarten children have half-day sessions. One hundred first graders eat in their classrooms and 400 children eat in the main cafeteria. The teachers eat with their classes, but have 25 minutes of free time, when the physical education department conducts a 36 minute recreation period with each class. By staggering the arrival of classes into the cafeteria by five minutes, waiting lines are avoided. Each class spends 25 minutes or more eating.

An electric portable steam cart taken

An electric portable steam cart taken to the Grade 1 rooms delivers the same menu served in the cafeteria. Five and six year olds are much happier eating in small groups away from the stimulation of the large cafeteria. We find that the young children are more relaxed and have fewer accidents and upset stomachs when they are served in their classrooms. Each classroom has its own toilet facilities, double sinks, and movable tables and chairs. The children remain calm in this quiet atmosphere and can take 45 minutes or more if necessary for lunch. The lunch is served on special trays with sections for various foods.

Have Morning Snack

The upper grades start to eat at 11 o'clock. Most of our children eat an early breakfast as they come to school on school buses. As a result, the younger children need a morning snack and eat last in the cafeteria, which means they do not have to hurry but can take as long as they need to eat. The older children find 25 minutes quite adequate for lunch. Snack milk is available to them in the afternoon.

Our program teaches the child to choose a good lunch since it gives him a choice of food. He handles his own money and is responsible for it; this is important, for many of our children, living in a rural area, do not have any other opportunity to do this. He learns to carry a tray and follow directions; this requires skill and dexterity. The children practice good table manners and are encouraged to carry on interesting table conversations.

Either eating or sitting with the class at the lunch period helps the teacher to be a part of the group and to see his class in an informal situation. He can observe behavior and overhear conversations that will help him to understand the whole child. Children usually talk about home, interests and anxieties. The teacher can observe children who need help in learning to eat proper food, and can work on social manners.

The success of the school lunch program depends on the combined efforts and understandings of all participating: the administration, the cafeteria manager, the teacher, the kitchen staff, the custodians, and the children. It is important that each feel responsible to recommend improvements through staff conferences and daily contacts.

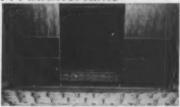
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Independent Appraisal, Competitive Bid Placement Provide Broader and Cheaper Fire Insurance

B. BRAD ARNEY

Business Manager, Effingham Community Unit District No. 40, Effingham, III.

O NE of the most neglected and bypassed areas in school business administration is the fire insurance program. Among the reasons for this are: (1) Information on recommended procedures for establishing an adequate insurance program is limited, and (2) any change from the traditional way usually is slow and difficult to accomplish. Pressures from within the community also may restrain the effecting of a change.

That the time and effort which must be put forth to develop an adequate school fire insurance program is worth while is evident from our experience in Effingham, Ill., Community Unit District No. 40, which covers 125 square miles and has nine attendance centers. The program, which has evolved here during the last eight years, has resulted in at least the following five benefits:

- More a dequate protection against loss, as a result of an independent appraisal of school properties.
- A more economical coverage, resulting from a study of rate makeups.
- Simplification of insurance administration, as a result of the reduction of the number of policies in effect and the establishment of one expiration date.
- A less expensive program, the result of savings from competitive bid placement.
- Provision for future evolvement of the fire insurance program, based upon a continuing development of sound principles and policies.

The following paragraphs review the steps taken to bring the fire insurance program of our district up to date.

There were these transition problems. The five years prior to the time the Effingham insurance study was initiated were a period of adjustment within the district, the result of consolidation with all its implications. At the time more than 20 different insurance policies were in force, involving companies varying from the very large to the extremely small, assessable concerns. Expiration dates were widely scattered, and no provision was evident as to how a claim would be adjusted in the event of duplicate coverage on a given loss. No record was available as to how insurable values had been deter-

An agent of record was appointed by the board of education. This representative prepared all policies, using an average rate for the entire unit. One adjusting agency was agreed to by the 12 companies participating in the program. All policies were issued for a five-year period with one date of expiration. Total coverage was based on appraisal figures provided without charge by insurance companies. The amount of insurance written by each company was determined by the school board on an objective basis.

Further refinement followed. Six months before the termination of the first five-year program, board members undertook a complete revaluation.

To bring all problems into focus and to establish definite policies for the administration to follow in its future decisions regarding fire insurance matters, three major questions were discussed at board meetings: How should insurable value be determined? What type of coverage is desirable? How should the insurance be placed?

Current insurable value of school properties was determined by independent appraisal. Inquiries regarding available appraisal services were mailed to all local general brokers and to a number of insurance companies outside our immediate area. These indicated the following: Appraisal services were available without charge from insurance companies; however, generally these covered only buildings, not contents. Also, appraisal values were not guaranteed by the insurance companies that were involved.

Board members believed that an accurate appraisal of contents, as well as of buildings, was important. Then, too, the failure of insurance companies to guarantee appraisal values caused concern; if a number of companies were involved, settlement of losses might be difficult, and possibly even costly, for the district. This would be particularly damaging in the case of coinsurance. For these reasons it was decided to take bids from independent appraisal firms.

Following the awarding of the appraisal contract, including upkeep services for the future, the successful independent firm completed a detailed appraisal report. This instrument, in my opinion, should be considered seriously by every school district before planning a fire insurance program.

In the report of the appraisal engineers, the value of school property was indicated in four ways: replacement cost, undepreciated insurable value, sound value, and depreciated insurable value. The latter figure, including portable equipment and yard improvements, was reported at \$2,-543,838.

(Continued on Page 132)



Once upon a time, there were 3 kinds of vinyl drapes all named Luxout. There was Translucent, Dim-out, and Black-out. And they all lived together at a big factory called Plastic Products . . . where they were all very happy. You see, they were flameresistant, so they didn't mind heat. And they were mothproof, so they didn't mind bugs. And they were very easy to keep clean, so they hardly ever had a bath. Besides that, they

all knew that someday they would go to just the right kind of school room to do just the job each did best. And they could see lots of girls and boys. So, the 3 Luxout Drapes were the happiest, best looking drapes in the whole world.

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For Information: Dept. NS 1822 E. Franklin St. Richmond 23, Va.

*Big Chimney School, Kanawha County, West Virginia, does!



Fire Insurance

(Continued From Page 130)

Next, the types of coverage were agreed upon. Before determining the kinds of protection desired, the board of education studied the rate make-up for Unit 40 to determine which type of policy would provide the most protection for each insurance dollar expended. Rates obtained from the Illinois Inspection Bureau were discussed. The following types of insurance were considered: 80 per cent coinsurance, 90 per cent coinsurance, replacement, separate policies, blan-

ket site policies, blanket policies, extended coverage, and vandalism and malicious mischief.

Contrary to the experience in many areas, 80 per cent coinsurance seemingly was our most economical buy. For this reason it was decided to purchase 80 per cent coinsurance with extended coverage and vandalism and malicious mischief.

Finally, the placement of insurance was worked out in this manner. To help resolve this matter, representatives of insurance companies were invited to board meetings, and all avail-

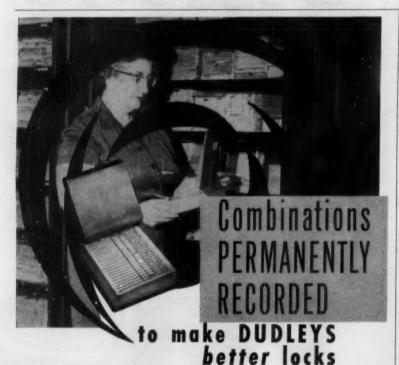
able research was scrutinized and studied. After further investigation, it was unanimously voted that the fire insurance should be placed through competitive bids. Nonassessable mutual companies would be considered on the same basis as stock companies. There would be no restrictions as to who could quote but, to be considered, companies would have to have at least an A+AAA Best Reports rating. Historical dividend payments would be given consideration. Local firms would be given a 3 per cent preference.

Once the basic issues were decided, specifications were written and quotation forms mailed to companies listed in "Best Insurance Guide" with an A+AAA rating or better. On the basis of bids taken, all insurance was awarded to one company under one policy for a five-year period.

There are these specific benefits under the present plan: The previous 80 per cent coinsurance, written by 12 companies, totaled \$1,450,700, at a five-year premium of \$20,590, divided into annual premiums of \$4118. The present coverage by one company is for \$2,027,490, at a five-year premium of \$28,577. The latter figure compares favorably with the standard manual rate premium of \$36,110.

Supt. Raymond Lane spearheaded the revision of our fire insurance program and provided the leadership essential to effect the change.

The present Effingham school district fire insurance program extends through July 1963. It is recognized that the current program still is not perfect; however, it is believed that the basic steps have been taken to ensure further refinement of the program in the future.



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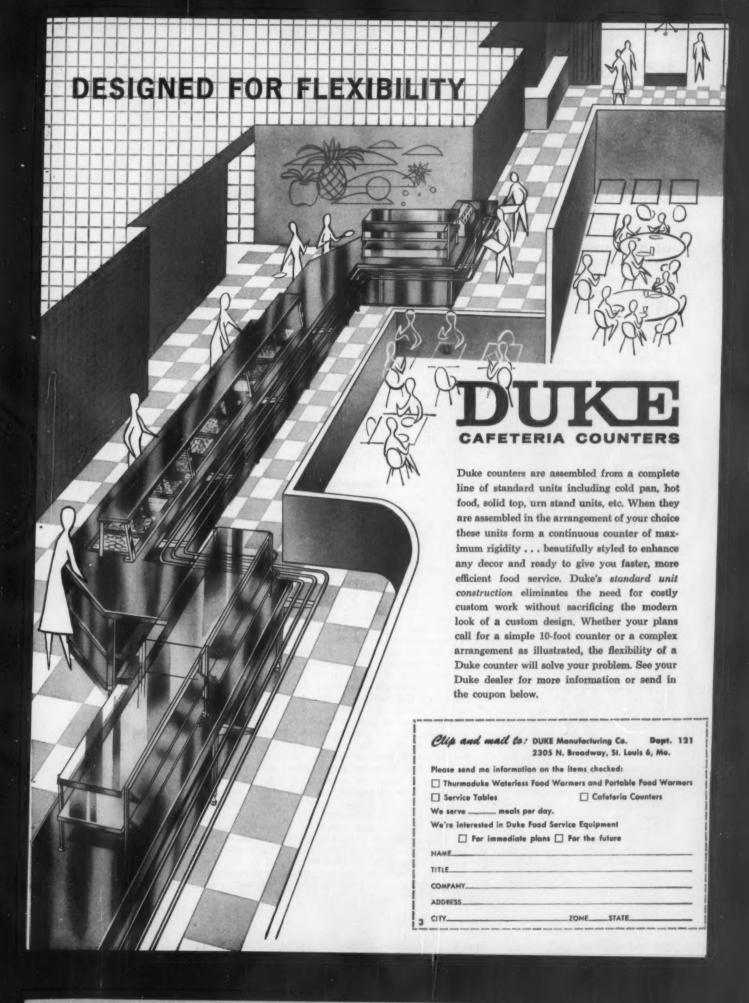
The standard of controlled locker protection since 1921

Requiring Teachers To List Memberships 'Impairs Right'

Washington, D.C. — The Supreme Court recently ruled that a state may not require its teachers in public schools to list their memberships in organizations over a five-year period.

The Court found the requirement unconstitutional on the ground that it would discourage freedom of association and belief.

An act passed in 1958 by Arkansas' legislature had required teachers at public schools or colleges to file an affidavit annually listing organizations that they had belonged to or contributed to within five years.



Issues become political when public agencies can't settle differences, thus

Compromise Is Best for City-School District Squabbles

LEE O. GARBER

Director, Educational Service Bureau, University of Pennsylvania

BECAUSE of the close geographic relationship between cities and school districts, it is not unusual that, on occasion, the cities attempt to exert certain types of controls over the districts and district property. When this happens litigation frequently results. Such was the case in Connecticut recently.

The city of New Britain attempted to extend a street or public highway across school land and the school committee — school board — objected. When efforts to compose the difficulty between the common council and the school committee proved futile, resort was had to the courts. Specifically, the question before the court was "whether the defendant city of New Britain, its common council, and its board of public works may, without the consent of the school committee, extend a public highway across land acquired, and presently used, for public school purposes."

Road Through School Property?

Sometime previously the school committee had acquired about 5 acres of land north of Steele Street on which it had erected the Lincoln School. At different times the school committee had acquired other tracts of land adjacent to this 5 acre site. Land just east of the Lincoln School was used as a playground and outdoor area for instruction in physical education. As time went by, the area in this particular neighborhood appears to have been developed with the population becoming more dense. At least, a traffic problem developed in the area of the Lincoln School property. One possible solution suggested to the common council by the board of public works was to extend Wightman Road - a highway that ran south from and perpendicular to Steele Street, with a "dead-end" just east of the Lincoln School. The common council voted to accept this plan. If followed, the plan would result in cutting a road through school property in such a manner as to separate the school building from a substantial portion of the school land used for play area and physical education instruction. To this prospect the school committee objected and refused to give its consent.

It should be noted that the school committee acquired the land in question by purchase and took title "in the name of the city." It paid for the land from funds in its "new school building account." The source of the funds was "from the sale of school bonds issued by the city for school purposes."

Rules for School Committee

The court ruled in favor of the school committee and against the common council. In arriving at its decision, the court first looked at the city charter and noted that it gave "to the school committee 'all the rights, duties or powers concerning schools and educational matters now or hereafter vested in committees of consolidated school districts and selectmen of towns by the laws of this state.'" These powers, as specifically enumerated in the statute, provided for the complete control over school lands, property and buildings, including their care, maintenance and operation.

With respect to the power of the common council, the court stated that the council had authority to plan, lay out, and change the streets but that "this power does not permit it [the council] to take, for street purposes, property actually devoted to school purposes, unless the school committee approves." It reasoned that, while the charter gave the common council the authority, in general, to take any property it needed in order to lay out a street, "it is not to be presumed, in the absence of express words or necessary implication to the contrary, that it was not intended that land already appropriated to one public purpose should be taken for another." In other words, the court ruled that, in the absence of express authority conferred upon it by the legislature, the common council could not take land devoted to school purposes.

Again, in commenting on the legal status of the school committee, the court stated that the committee is "an agency of the state and has complete charge of public education within the city." It also ruled that the school committee has broad powers and when it acts within the framework of these powers it "is not subject to control by the common council or officers of the city."

In ruling as it did, the court was following the general rule accepted by most courts. It left one question undecided, however. The court's ruling was, specifically, that the city could not take land used for school purposes. One can only wonder, therefore, how the court would have ruled if the land in question had been acquired by the school committee in anticipation of future needs but was not, at the time of litigation, actually being used for school purposes. This is not said by way of criticism, because it is a general principle of law that courts rule only on the question or questions before them.

One aspect of this decision of primary interest to public officers is the commentary by the court regarding the best remedy for "squabbles" that arise from time to time between public agencies which operate in close proximity. It said:

"Ordinarily, collisions of this nature between two governmental agencies are settled by compromise. When efforts at compromise fail and one agency cannot compel by law the action it desires from the other, a political, rather than a legal, issue is presented. The school committee and the common council are chosen by the electors. . . . If either the school committee or the common council has not exercised its judgment fairly, intelligently and in the best interests of the city, the remedy is one, inherent in representative government, to be determined by the electors."

^{*}Canzonetti v. City of New Britain, 162 A. (2d) 695 (Conn.).



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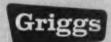
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Call for Halt on Misuse and Overuse of Tests

CHICAGO. — "Schools should resist the trend toward wider and wider application of tests and should declare a moratorium on test construction and test use" until certain difficulties can be resolved. In this statement before one of the 36 group meetings of the 16th National Conference on Higher Education, John C. Palmer, dean of undergraduate admissions at Tufts University, reported what he called the belief of "many in measurement and guidance."

More than 1500 college and university presidents, deans and professors attended the conference here March 5 to 8. It was sponsored by the Association for Higher Education, an N.E.A. department.

Dean Palmer charged that publishers' catalogs are "filled with lists of tests that are invalid for their reputed purposes and whose reliability is dangerously low or improperly assessed and reported." He said a more serious problem is "the attempt to use test results in the evaluation of the comparative efficiency of either teachers or of school systems."

Negative Attitudes Toward Testing. "The most disturbing outcome of the increasing tendency to use testing and test results as extrinsic goals and rewards," he claimed, "is the negative and unproductive view of the assessment process that is developing in the attitudes of teachers, parents and, most critically, in boys and girls."

Another analyst, Charles C. Holt, director of the joint testing project (A.A.S.A., N.A.S.S.P., and C.C.S.S.O.), reminded the group that "tests are of value only as their results are used as one factor within the over-all process of evaluation." Other appraisal technics that should be included in this process, he said, are: observation of individual student behavior, anecdotal records, rating scales of pupil characteristics, sociometric devices, and individual interviews and conferences.

External Effect on Curriculum. Concentrating on external testing programs, Mr. Holt said that their effect on the curriculum is perhaps the most serious threat. Eight per cent of the schools try were sampled in the joint testing project reported that teachers in those schools try to teach test content; approximately 13 per cent reported the changing of courses

in one or more subject areas to earlier school years to prepare students for certain external tests.

Sarnoff A. Mednick, assistant professor of psychology at the University of Michigan, discussed the problem of getting college admission for the "creative nonconformists" who "simply do not share some of the values relevant to gradegetting.

"We must look to those tests that have been constructed so as to require the student to make original responses in ways which meet well defined requirements. In this way we can hope to select not merely the nonconformist, but the nonconformist who can bend his originality to artistic or scientific tasks," he said.

Need for Research on Learning. Francis S. Chase, dean of the graduate school of education, University of Chicago, stated that probably the most essential contribution that higher institutions can make to the improvement of certification standards for secondary school teachers is "through research that will illuminate the teaching-learning process.

"Until we know more about how human beings learn and what motivates them to continue learning, we are in a poor position to measure the effectiveness of teaching," he said.

Also, there is a "pressing" need at this moment, Dean Chase suggested, for a "reconceptualization of the role of the teacher," taking into account the varied resources now potentially available to the learner and the judgments involved in enabling him to draw upon the kinds of resources most beneficial.

Role of Junior College. One area that junior colleges should give attention to is a comprehensive program in general education for terminal students, according to James W. Reynolds, professor of higher education, University of Texas. "Many of the youth enrolled in junior colleges have no desire for vocational education or for courses which will prepare them to transfer to four-year institutions," he said.

Also, junior colleges should become a part of the state system of higher education, and junior college leadership should participate actively in the planning of this development, he said.

Junior colleges should give more con-

sideration to programs of community service, providing "additional services" over and above the regular program offered during the regularly defined school day, on campus, and for full-time enrolled students. Another phase of the community service program should focus attention on "helping adults overcome deficiencies in their formal education."

Others goals include a strong curriculum tie-in with junior and senior years of secondary schools, guidance and counseling, and placement and follow-up in student-personnel services.

Credit arrangements and knowledge of curriculum content are problems in the articulation from high school to college, maintained James D. Logsdon, superintendent, Thornton Township High Schools and Junior College, Harvey, Ill.

He reported that the University of Illinois has used a program of acquainting representative secondary teachers in the state with course content and expected level achievement of students. Also the university has invited English teachers to submit high school compositions for grading by university English instructors, thus both teacher and student gain ideas of the standards to be met.

Jack Arbolino, director of the advanced placement program of the College Entrance Examination Board, claimed that "our weakest joint [in education] is between high school and college." He claims that the advanced placement program is one "tremendously important" method helping to bring about curricular articulation because secondary schools and colleges "like it, and it works."

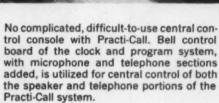
Relief in Elementary Language Instruction for Colleges. Edward H. Buehrig, professor of government, Indiana University, contended a fundamental reform is badly needed with respect to the teaching of language generally. "The European languages belong in the high and even the elementary school. Until freshmen come to us with effective command of at least one European language, the college curriculum will continue to be unduly burdened with elementary language instruction. To the extent that European languages can be dealt with prior to the student's entry into college, room can be created in the undergraduate curriculum

(Continued on Page 138)

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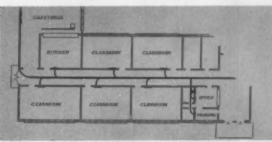
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(Continued From Page 136)

for many other things, including instruction in the more exotic languages."

He said that the United States is the only major country in which the college-bound 18 year old is typically illiterate in any but his own tongue.

Desegregation Progress. According to the records of the Southern Education Reporting Service, said Reed Sarratt, executive director, "there are today 139 formerly all-white tax supported institutions above the high school level which are desegregated in practice or in principle, either by court order or voluntary action." He said that these are 60 per cent of the 228 predominantly white public colleges and universities in the 17 states that in 1954 maintained compulsory segregation.

A "quickening of the pace" in desegregation in education was predicted, a major reason being the election year of

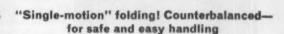
The vice president for academic affairs of Pennsylvania State University, Lawrence E. Dennis, outlined the role for higher education in the development of the Peace Corps. "The proper role — indeed, the only role — for higher education in the development of the Peace Corps is up front, in the co-pilot's seat, sharing without hesitation in the risks, helping to map the course, sitting in at the controls when necessary, willing and ready to aid in the decisions."

A strong endorsement of President Kennedy's proposals for higher education was given at the national meeting. The conference recommended the establishment of a permanent council of educational advisers to the President to aid in formulating policy and in coordinating the government's role in the support and promotion of education. Also recommended was passage of legislation for continuance and expansion of the College Housing Loan Program, introduction of a new program of long-term loans to both public and private institutions for construction of needed academic facilities, grants to both public and private institutions to meet up to 50 per cent of the costs of needed academic facilities, and a scholarship program providing a minimum of 25,000 new scholarships annually.

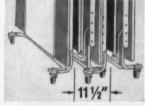
New Association President. Nominees for president for next year include Harriet D. Hudson, dean, Randolph-Macon Women's College, Lynchburg, Va.; Roy A. Price, professor of social science and education, Maxwell Graduate School, Syracuse University, Syracuse, N.Y.; Judson C. Ward Jr., vice president and dean of the faculty, Emory University, Atlanta. Election will be by mail.

Arnold E. Joyal, president of Fresno State College, served as A.H.E. president for 1960-61. — P.R. New improved design makes this Hamilton Enickson one-fold table the ...

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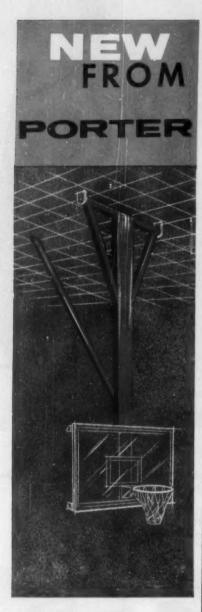
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Report

from WASHINGTON

By EDGAR FULLER

KENNEDY memo presents arguments for legislative package on education. Says grants to church related schools unconstitutional.

A lengthy memorandum presenting the Kennedy Administration's argument for the constitutionality of its legislative program in education has been filed with Congress and made public. Prepared at the request of Chairman Wayne Morse of the Senate subcommittee on education by attorneys of the Health, Education and Welfare Department, in consultation with the Department of Justice, it presents brilliant and sometimes subtle persuasion for the Kennedy bills on public school and higher education. Then it advises Congress on how to be certain that new legislation can be brought before the Supreme Court for tests of constitutionality under the First Amendment.

On a few of the issues, opposition lawyers may have the advantage before the Supreme Court, but this possibility does not detract from the current importance of the memorandum. It presents an initial estimate of constitutionality appropriate for the executive branch.

Congress soon may make a second preliminary estimate by passing the legislation. Then the Supreme Court undoubtedly will give some weight to these executive and legislative estimates of constitutionality in its final judgments on any specific cases. The memorandum is an excellent contribution to the national discussion of public and private education.

The first conclusion of the memorandum is that general grants of public funds to church schools are unconstitutional. The memorandum cites the principle stated by Justice Black in Everson versus Board of Education as binding: "No tax in any amount, large or small, can be levied to support any religious activities or institutions, whatever they may be called, or whatever form they may adopt to teach or practice religion."



TOMB OF THE UNKNOWN SOLDIER

The memorandum also says: "Since no effort is made to earmark the funds for specific purposes, such a broad grant would inevitably facilitate the performance of the religious function of the school." Thus begins the contention that general purpose funds facilitate religion in the school, but that special purpose funds do not.

One may agree that funds for general purposes always facilitate the performance of the religious function of a church school, without implying that funds for special purposes seldom or never do. Merely an "effort to earmark," even if accomplished, could scarcely save funds for even limited instructional purposes from unconstitutionality if they finance religion in such a school. The contention foreshadows later discussion on the loan provisions of Title 3 of the National Defense Education Act.

LOANS to church schools also unconstitutional, says memorandum. Cites McCollum case and proceeds to draw an analogy.

The second conclusion is that general loans to church schools are likewise unconstitutional. The memorandum states: "These benefits plainly have the purpose of providing financial advantage or convenience to the recipient. And like the broad grant, the across-the-board loan would inevitably facilitate religious instruction."

It adds that public property cannot constitutionally be lent for religious purposes, citing the McCollum case, and that the lending of public credit is in the same category. The Zorach case is then cited for the unequivocal position that "Government may not finance religious groups."

(Cont. on p. 142)



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Report From Washington

(Continued From Page 140)

The third general conclusion is that tuition payments for all church school pupils are unconstitutional. The word 'all" leaves much to the imagination, possibly implying that any number of pupils short of "all" might be selected and made eligible.

The memorandum says such tuition payments accomplish indirectly what grants to church schools would do directly, and that ". . . tuition payments, whether made to the school or to the parent or student, would constitute support of church schools. . . ." It points out that state courts have followed the Everson case in ruling such tuition unconstitutional because it "compels taxpayers to contribute money for the propagation of religious opinions which they may not believe."

UNCERTAIN constitutionality in loan provision of N.D.E.A. Loans "likely" to be upheld as constitutional, according to memo.

In these areas the memorandum deals with the three interrelated constitutional limitations that apply: the twin requirements of the First Amendment against establishment of religion and guaranteeing the free exercise of religion, and the due process clauses of the Fifth and Fourteenth amendments. It accepts the

Everson decision upholding use of tax funds for public bus fares of parochial school pupils on their way to and from school as the outer limit under the federal Constitution in the area of auxiliary services. This exceeds the outer limit of constitutionality under many state con-

Another area of uncertain constitutionality is recognized in the loan provision of Title 3 of the National Defense Education Act. This authorizes federal funds for the purchase of materials and equipment to improve instruction in science, mathematics and modern foreign languages in elementary and secondary schools. The memorandum regards these loans as "likely" to be upheld as constitutional, saying they are for special purposes not closely related to religious instruction, are intended to advance specific national purposes, and are not likely to release other funds for religious purposes because the loans must be repaid.

The distinctions are unconvincing. Religion pervades the curriculum in church schools, and these subjects constitute some 40 per cent of the curriculum. The national interest in education has been recognized by Congress as covering many more than these subjects; education itself was so recognized as far back as the Northwest Ordinance.

Governmental financing through loans constitutes an economic benefit to the school. These loans could be classed more logically with so-called "acrossthe-board" loans to elementary and secondary schools, and it is significant that the memorandum ends the section with the following statement:

"In what other directions this principle of special purpose loans may be extended is difficult to ascertain. Typically secular and sectarian education is so interwoven in church schools as to thwart

most possibilities.

The memorandum deals with higher education more briefly than with the elementary and secondary schools. On some points it is convincing. On others, however, it leaves an impression of desperate advocacy, occasionally making dogmatic statements that are no more than opinions while omitting demonstrable facts that objectivity requires.

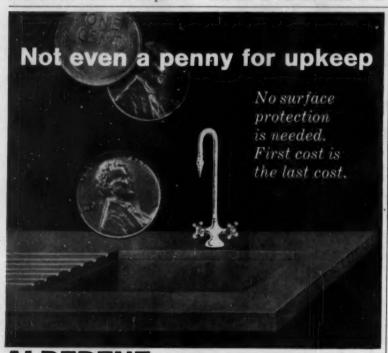
"The constitutional principles involved are obviously the same whether the subject is elementary and secondary school education or higher education, but the factual circumstances surrounding the application of the principles are dramatically different," says the memorandum. Some of the conclusions reached in reversing settled constitutional principles on behalf of higher education are far more different than the circumstances.

SCHOLARSHIPS for students in both public and private colleges appear here to stay and will be expanded with no trouble.

The memorandum naturally emphasizes differences between elementary and secondary education on the one hand and higher education on the other as much as possible. There are some differences. For instance, elementary education is compulsory and secondary education is partly compulsory, although most states do not require attendance in either public or private classes when children otherwise are educated effectively. College attendance is voluntary. There are also differences in maturity of the students, so sectarian influence can be judged better by college students.

The memorandum emphasizes that 41 per cent of college students attend private institutions, and that to limit the use of scholarships at these institutions would unbalance higher education and restrict individual opportunities. Holders of federally financed scholarships for college attendance may be privileged to attend sectarian colleges or universities under the guarantee of free exercise of religion in the First Amendment.

In any event, enough real differences in circumstances between students and institutions at the higher and lower levels exist to support a strong case for upholding the constitutionality of federally financed scholarships used in any accredited public or private college or uni-(Cont. on p. 144)



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(Continued From Page 142)

The memorandum states: "Governmental assistance [given] directly to colleges for the construction and expansion of academic facilities perhaps raises in the case of sectarian institutions a closer constitutional question than scholarships." Here the attorneys hint that perhaps the nondenominational, nonprofit private colleges and universities might be considered more similar to the public than to the sectarian higher institutions. I believe they are, insofar as the First Amendment is concerned, but to admit this openly in the memorandum is too much to expect. It would undermine the arguments for many of the positions taken, because sectarian colleges enroll about the same percentage of college students that sectarian schools enroll of elementary and secondary students.

For elementary and secondary sectarian schools, federal financing of facilities is said to be unconstitutional, but circumstances bring the attorneys to an opposite conclusion for higher education. It is a close question.

FEDERAL GRANTS to sectarian institutions of higher education are constitutional, says memo, which rejects Everson case.

Half a page in the memorandum covers the most difficult of all the constitutional questions posed by the educational program of the Kennedy Administration. It holds that federal grants to sectarian institutions of higher education for operational expenses, in addition to tuition and other costs paid by holders of federal scholarships, are constitutional.

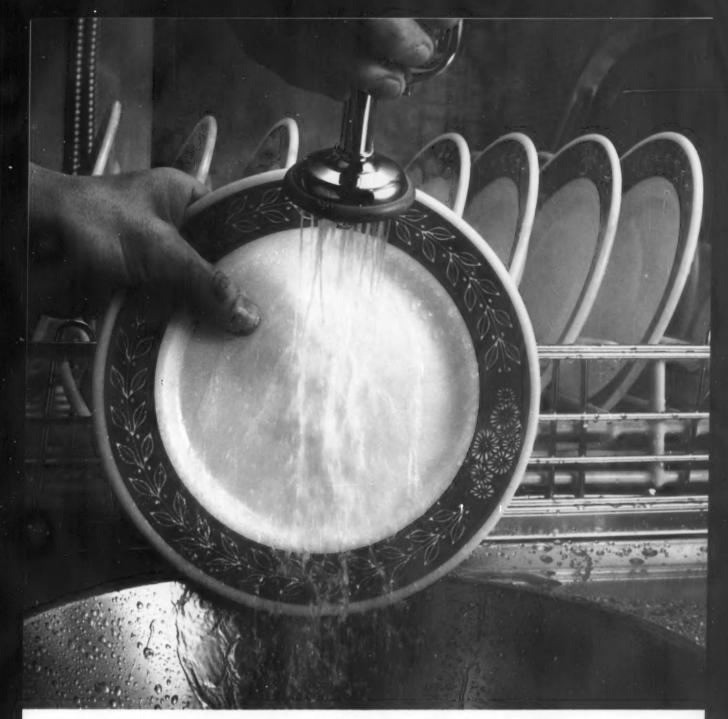
Its argument is: "The payment to the institution is in reality merely a supplement to the scholarship, no less valid constitutionally than the scholarship itself. To regard such payments as unconstitutional would make the question of who receives the payment the one decisive criterion and sacrifice substance to form."

The memorandum rejects the authority of the Everson case for higher education:

"Everson put some emphasis on who received the assistance, student or institution. From this it has been argued that while assistance to the institution itself is prohibited, assistance to the student is more likely permissible, even though, functionally viewed, a similar purpose is served. This view overstates the significance of form alone. We believe that who receives the benefit is important only where form serves a substantive end."

Such direct federal support of institutional expenses of church-controlled colleges and universities clearly violates

(Continued on Page 148)



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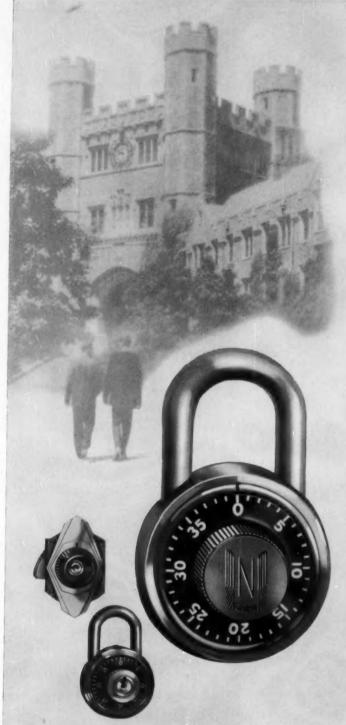
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(Continued From Page 144)

the First Amendment. Scholarships would be no more than a measuring device to determine the amount of the grants. As a practical matter, it would be impossible to use specific grants for specific scholars. The criteria for unconstitutionality in the memorandum would be violated beyond the power of differing circumstances to correct. This would be general and direct federal financing of religion. The elementary and secondary schools would be next, approached through the junior colleges that typically combine both secondary and higher education in each institution.

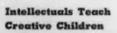
GETTING judicial review for education legislation is tricky process. Memo prescribes method.

The memorandum makes an excellent contribution in discussing why federal aids to religious institutions have not been tested for constitutionality. The reason is the decision in the case of Massachusetts versus Mellon, which held in 1923 that the federal spending power cannot be challenged by an individual taxpayer.

The memorandum says: "There is, therefore, no significance to be attributed to the fact that the existing pro-

grams have not been litigated. We can regard them as precedents only for what the Congress and the President, not the Supreme Court, regard as within the First Amendment."

Then the memorandum suggests to Congress a way to ensure that new federal legislation may be tested in the ". . . Congress could direct the Commissioner of Education to make some benefit available to private schools with the requirement that such benefit shall not contribute to an establishment of religion or prohibit the free exercise thereof. The same legislation would also provide for a hearing on a written record of any application rejected and a statement of findings by the Commissioner. The Commissioner's decision rejecting any application for a benefit would be made subject to judicial review." Unless this is done, the government attorneys believe, it will be difficult if not impossible to obtain court review to determine constitutionality of federal legislation on education.



ORANGEBURG, N.Y. — Creative pupils from grades 5 through 12 are attending Saturday morning classes taught by intellectuals in an experiment at Tappan Zee High School here.

The idea for the experiment was proposed by Betty Friedan, a writer, who said its purpose is "to give children an idea of what it's really like to be a scientist, architect, engineer or writer." She believes that the "children can be more easily inspired" by attending classes under such men.

Pupils were chosen from a list of 300 recommended by teachers in seven schools in the district.

UNESCO Releases Volume I of World History This Fall

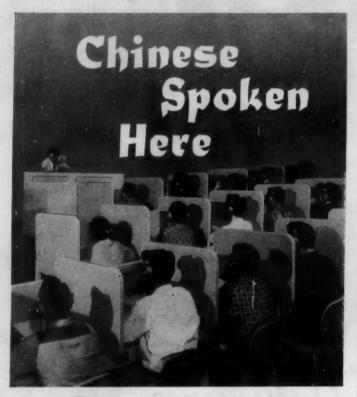
New York. — This fall, part of the nine years' work of 500 scholars around the world will be ready for publication—the first of a six-volume cultural and scientific history of man financed by UNESCO. Announced in 1951, the volumes were commissioned to provide a historical record that would avoid nationalist biases.

The idea for the work dates back to the Conference of Ministers of Education in London in 1943. Sir Julian Huxley, originator of the project, said the history concentrates on the scientific and cultural progress of the human race, rather than on military and political aspects.

One of the volumes, covering the period from 1300 to 1800, will be prepared by Louis Gottschalk of the University of Chicago.







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(Continued From Page 77)

mostly the latter, educators have been able to reduce their common experiences into definite and irrefutable laws that have stood the test of time. From scores of these laws, three examples have been selected for their application to school administration.

The most important of these is Ikkies law, originally discovered circa 1820 by an educator named Ichabod Crane. The early history of this famous pedant is shrouded in legend. It is said that he was a scholar, a public relations coordinator, and a school superintendent. The fact that he left the teaching profession suddenly for parts unknown should not invalidate Ikkies law, for such experiences are by no means uncommon among school administrators. Ikkies law has tremendous "signifi-

Ikkies law has tremendous "significancies" for the administrator in his selection of school boards, the appointment of advisory committees, the employment of the administrative and teaching staff, and even in the choice of the community wherein a superintendent wishes to work.

IKKIES LAW: A school administrator who is intent on harvesting the tall corn should never get mixed up with pumpkin heads.

A second important law is derived from the career of the former president of a great university, Mark Hopkins, whose teaching ability is the subject of legend and poetry. This law has been fearfully misunderstood and abused. From time to time Dr. Hopkins has been most unfairly accused of prejudice against school supply companies, but like the apple-tunked Newton or the Saturday night dunking of Archimedes, the alleged incident in which Dr. Hopkins is said to have participated is nothing more than a falsehood. The incident, however, has been used with telling effect by budget cutters and taxpayers associations.

THE LAW: Learning takes place in inverse ratio to the activities of ants and bugs which inhabit a log.

Slight reflection will show a much wider application of this law than is generally realized. It should be extended to include the bugs in a school curriculum.

The third of these important laws comes from some unknown author and, for the sake of convenience, it is titled here, "The Bread and Butter or Natural Phenomena Law." It governs all phases of a school superintendent's activities, but it is particularly in evidence at pub-

(Continued on Page 152)



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stated thus.

THE LAW: The toast always falls

buttered side down.

The astute administrator who ponders the three laws and applies them to his own situation is bound to receive great benefit and gain considerable prestige. These laws should not, however, be made part of a code of ethics or be revealed to a board of education except under duress or as a parting admonition

to urge the board forward to greater professional endeavors.

Specific Laws. The value of this study on the laws of administration has been enhanced greatly by our resource correspondents. From their own battle-grounds and their abilities with paradoxical semantics they salvaged many laws on special facets of administration. These laws were fed into the data processing machine to test their validity; among those that emerged unscathed are public relations and research.

Hanson's law on public relations has been discovered by Carroll Hanson, director of the publications services branch of the U.S. Office of Education. It is a simple and profound law which, if understood and acted upon, could revolutionize that all too common sticky situation where the editor of the local newspaper and the school superintendent have at each other lustily for the benefit of increased circulation of newspapers and blood pressure.

HANSON'S LAW: The less time a school administrator spends with the press, the more often he will appear in the newspapers.

The increasing importance of research as an integral part of school administration makes it doubly necessary that more light be thrown on the dark, deep depths of the research process. It is generally agreed that the present laws on research, written by and for researchers in time agone, are completely incomprehensible to lesser mortals and school superintendents. Roy Hall, nationally known for his prowess in educational research, has come up with a law that may help to reassure administrators that research is cognizant of its own failings. This law may well create a warmer and more sympathetic climate between research and administration.

HALL'S LAW: The most attractive curves often have the least data to support them.

On this highly controversial note, the data processing machine used in this study brought the entire work to an abrupt conclusion, leaving the average administrator about where he started. It may prove, however, that machines are not infallible and will never replace a teacher in living color.

It is true that these illustrative laws selected by the data processing machine are paradoxical. The only defense for this accusation is that school administrators live and work in a paradoxical world wherein they must be scholars and businessmen, tough and tender, builders and busters, doers and dreamers. They must be guided by the current state of public opinion; they must be moved by the alarums and rumors which sweep a paradoxical world while, at the same time, they must everlastingly hold fast to those eternal truths by which man may someday hope to reach the heavens.

Films for Learning. A survey for the Journal of the Society of Motion Picture and Television Engineers reveals that expenditures for non-theatrical films increased 9 per cent last year over 1959 expenditures. Total outlay was \$389 million. The largest jump was in education — 32 per cent.





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1. The HOWMATIC "TN" opens or folds in one, easy motion. Either action takes just 3 seconds. Here's why:

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When the HOWMATIC "TN" is folded, rubber-capped center legs remain free of the ground. The moment the table is fully open, however, these center supports come down automatically, grip the floor firmly, anchoring the unit. 2. Strength where it counts. The HOWMATIC "TN" is built around the same type of durable, all-steel chassis for which HOWE tables are noted. Steel rivets join this chassis to the table's 14-gauge tube steel legs permanently.

Chassis and legs are finished with a bright, rustproof, Cadmium plating that won't chip, never requires repainting.

- 3. Durable top. The HOWMATIC "TN" comes with a solid, built-up top consisting of a plywood sheet covered with a layer of plastic laminate. (Your choice of patterns.) A hardboard backing adds extra strength. The entire top is trimmed with a plastic flush edge.
- 4. Compact and maneuverable. The HOWMATIC "TN" handles easily. 3", hard rubber, swivel casters insure maximum mobility—important when moving a table through crowded corridors.

Rustproof bearings assure long life, quiet, smooth, trouble-free service.

5. Safety features. Counterbalanced spring construction holds the unit in check, keeps the HOWMATIC "TN" from suddenly snapping open or slamming shut.

A 7/6" safety gap where the top's two halves would meet eliminates the danger of injured fingers. In addition, the HOWMATIC "TN"s top has 2" radius safety corners.

Another safety feature is the table's low center of gravity. When active youngsters get playful or the folded unit is moved about hurriedly, the HOWMATIC "TN"s design keeps table from tipping.

- 6. Saves valuable school activity time. No need to clean the HOW-MATIC "TN" before folding and storing. At all times, surfaces are easy to reach and clean. In addition the unit's single-fold structure and ½" center seam eliminate corners where food particles otherwise might accumulate.
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A.S.C.D. Conference

(Continued From Page 93)

throughout the country. He urged members of the educational profession to be creative, to get away from their defensive stance, and to submit proposals for action. The new president referred here to his address before the John Dewey Society on one evening of the conference, in which he said:

"If educators are to be heard in the era of the new Administration that stretches before us, we must develop imaginative new ideas on the national level. We must appraise all proposed innovations. We must speak out for the

best we know and for what we are finding out, and in the process must learn to use the mass media for communication. If we do so, the voices of competent professionals may be heard in the land, and we will fulfill our responsibility of educational leadership."

Executive secretary reports. In her second annual report as executive secretary, Margaret Gill told members that gain in membership to January 1 (which is the official date for listing) amounted to 300 (about equally divided between regular and comprehensive), reaching an all-time high of 7259 members. Dr. Gill said that during the past year more

energy had been flowing through the collective system of the organization as the members became conscious of growth and the excitement of "this is the year."

After August the professional staff again will comprise three full-time members with the addition of Karl Openshaw, formerly head of the department of secondary education at Adelphi College, Garden City, N.Y.

Urges clean-cut decisions. The man who in the words of the new president, William Van Til, is "Mr. Peace Corps himself" spoke at the closing general session. He was the Rev. James H. Robinson of the Church of the Master, New York City. For the past several years, the Rev. Mr. Robinson has been in charge of the planning of Operation Crossroads Africa, a program which has sent American students to Africa during the summer months.

Rodney Tillman, George Peabody College for Teachers, Nashville, Tenn., in his presentation on grouping, told the large assembly on proposed reorganization in education that educators "must be concerned with the social setting in which learning takes place."

He said that he had observed that youths tend to look at themselves in terms of how they are listed or grouped. When he made the statement that "teachers also feel grouped," the audience broke into applause.

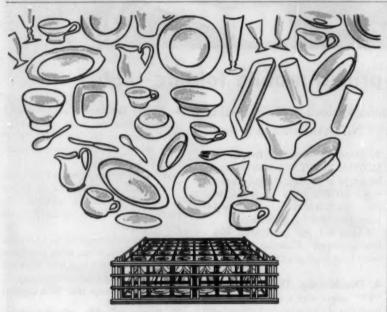
Team teaching is a new approach to the cooperative efforts that teachers have been using for many years, said George Martin, Salem, Ore. Some "theoretical advantages" that he sees in the method are: (1) permits superior teachers to extend their influence among the entire school system; (2) provides flexibility in the use of time, place and talent; (3) offers impetus to curriculum study and improvement, and (4) helps attract teachers to the community.

He believes that the full merit of team teaching is yet to be determined, but considers as needs for its success an effective leader, cooperation between members of the team, and acceptance by administration and the public.

Harold G. Shane, Indiana University, Bloomington, questioned the concern about machines and structure instead of about why we want them.

He went on to say that we need individuality to cope with this complex era; it is this complexity that threatens individuality.

Dr. Shane said that reliance could not be placed on any single grouping plan. He warned the group to "be careful to be sure that we're postponing premature and unreasonable pressure on the child," that the grouping will bring the desired result, and that heed to the total child is paid.



MAKES ORDER FROM DISORDER

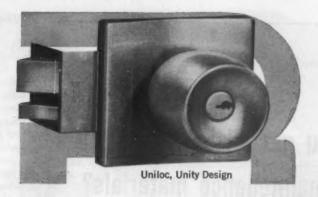
Sani-Stack

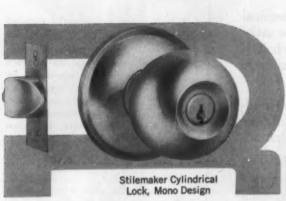
If disorder has you down — Sani-Stack's in order! When china and glassware are picked up and placed in compartmented Sani-Stack racks, they're safe — through washing, transportation and storage — until needed for serving again! Pieces are handled only twice! Ordinarily they're handled seven times. Reduced handling means reduced breakage. And you save time, labor and breakage!

There's a Sani-Stack rack designed for practically every size and shape of china and glassware. Metro stocks the widest variety for quick delivery. Metro will tailor a rack to special requirements.

And when you specify Sani-Stack, check for the seal that says it's real. Accept no Sani-Stack substitute! Write for a free copy of "The Sani-Stack System." It shows how to save money in dish handling and why Sani-Stack is best for you!

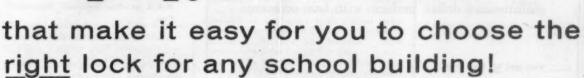






"Ten-Strike" Mortise Lock, Modera Design

the three



Whatever the building . . . whatever the budget . . . look to Russwin for your doorware! Three rugged locksets to choose from . . . each available in a wide choice of designs, finishes, functions. Call your Russwin supplier. Or write Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.



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Do you get all 5 when you buy maintenance materials?

- I...A genuine guarantee. Every Acme Chemical product is guaranteed to give you complete satisfaction in the proper application for which it is intended. If it does not fulfill every claim we make for it, you may return it for credit.
- 2.. Sold direct to users: All Acme Chemical products are sold directly to you through full-time Company representatives whose duties include servicing the product to *your* satisfaction.
- 3.. Sole manufacturer: Acme Chemical manufactures its products from specified grades of quality materials and rigidly controls quality throughout the manufacturing process. The quality is always the same, shipment after shipment.
- 4..Backed by continuous research: Constant, careful research in the Company's three Laboratories stands behind every Acme Chemical product. Complete facilities are devoted to raw materials testing, water analysis, bacteriology, quality control, and developing new products.
- 5.. Your best friend in building maintenance materials is quality. Quality materials assure time saving and labor saving, since only with quality materials can labor, which is 90 to 95% of your maintenance dollar, perform with true economy.

you get all five from



Who Speaks for Education

(Continued From Page 69)

pared by the Ford Foundation and its branches helpful in interpreting experimentation in education. The weight given to the influence of foundations on elementary and secondary schools may well vary with the extent of activity by a foundation in a particular section of the country. Again, the hearing a spokesman for a foundation receives from the public is thought to be determined by what local leaders think of their suggestions more than by the ideas themselves.

Professional organizations believed to be ineffective. It will come as no surprise to any alert professional educator that the organizations to which he belongs are not considered by these jurors to be receiving a strong hearing by the American public. Most noneducators consider such groups as the National Education Association and its numerous affiliate bodies relatively unknown and ineffective in influencing public attitudes toward schools.

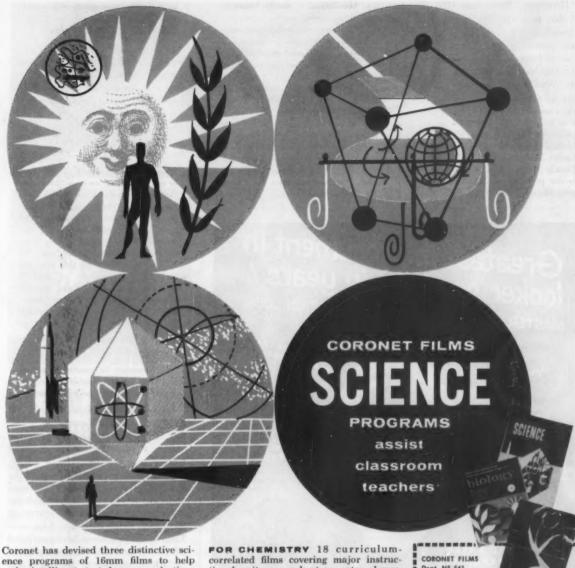
Perhaps the most typical indictment comes from Mr. Caswell of the Los Angeles Examiner:

The professional organizations — even the mighty N.E.A. — are not familiar to the general public. As a working education editor, I find that most laymen do not understand when I refer to the N.E.A. by its initials, even though its national convention was held in Los Angeles this year. The lesser associations of educators and school boards are even less familiar to the public.

Unfortunately, I believe almost any organization with an impressive title containing the words "school" or "education" or "teacher" can throw as heavy a punch as the N.E.A. or other legitimate organization.

Such an observation should cause pedagogues to bury, at once and forever, the New Deal habit of coining meaningless abbreviations for organizations, such as N.E.A., A.S.C.D., A.A.S.A., A.S.T., T.E.P.S., A.E.R.A., A.C.E., A.A.C.T.E., and D.A.V.I., out of the first letters of the major words in their legitimate titles. The John Dewey Society deserves credit for sticking to its full title in spite of the

(Continued on Page 158)



make intelligent, tested, group selections from more than 1,000 fine teaching films.

The films in each program have been designed to meet ordinary classroom requirements . . . to provide teaching assistance, not to substitute for teachers. NDEA funds may be applied toward purchase in all instances.

The outstanding feature of these science programs is the extent to which the films correlate to major textbooks in each area -as documented in master correlation charts available for each subject area.

FOR BIOLOGY 51 films to help clarify basic concepts . . . each correlated to appropriate units in 11 major textbooks free teachers' guides for each film . . . NDEA in most states permits purchase of complete series with your school paying as little as \$350 a year!

tional units . . . and, at no extra charge, teachers' guides . . . a handsome steel cabinet to house all the films . . . and a manual to help teachers make maximum use of the films . . . with NDEA in most states, your school pays as little as \$140 a year!

FOR SCIENCE IN INTERMEDIATE GRADES 138 basic films correlated to thirty textbooks in grades 4-6... complete breakdown by major instructional units such as The Universe, Plants and Animals, Physical Science, and Health . . free teachers' guides for all the films . . . with NDEA in most states, your school pays less than \$2,000 per year for the complete program of 138 science films!

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- Please send complete information on the following Coronet film programs:
 - ☐ Biology Chemistry
 - Science in Intermediate Grades
- Please have representative cell to furnish further information.

Parising

ORO NET (Continued From Page 156) fact that such visibility leaves it and its members open to the thrusts of every prototype Don Quixote who comes to joust with Dewey's shadow.

To the National Education Association, other sample reactions are:

N.E.A. information and its magazines are useful, but I tend to view it as I would the A.M.A. — an organization in support of its membership. — Glenn Matthew White, Ladies Home Journal.

Usually I don't pay much attention to the pronouncements of such organizations as the National Education Association — partly because they often appear to be in the nature of pressure group publicity, partly because they are frequently written in pedagese instead of English. — John Fischer, Harper's Magazine.

. . . a lot of people swear by the N.E.A. and a lot of others view it askance. Unless there were some sort of poll, I wouldn't know what percentage should be assigned to the two camps. — Virginius Dabney, Richmond Times-Dispatch.

The N.E.A. must surely be considered a prime spokesman for education, but I believe many look upon it as a big pressure group which emits much propaganda. — Robert Dishon, the Milwaukee Journal.

In spite of the general tendency to write the N.E.A. off as a pressure group, some evidence indicates that editors make use of the published material and the consultative resources of that body. An example comes from Alfred R. Schneider, vice president of the American Broadcasting Company:

I can generally report to you that in our programs, such as "Meet the Professor" and "Expedition," our people work closely with the National Education Association and such other organizations as the Association for Financial Aid to Education and the Association for Higher Education. In this way we feel that we achieve an over-all perspective in that these groups, being national in scope, are representative of the individual institutions of learning in the country.

And Erwin D. Canham of the Christian Science Monitor says:

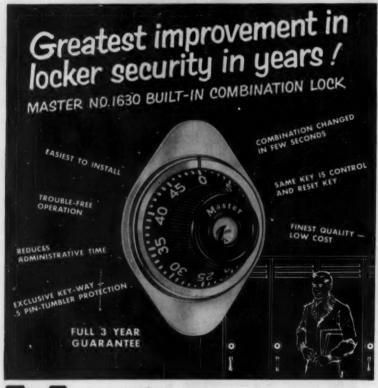
The incessant informational activities of the N.E.A. and its associated organizations have an effect, too.

Interestingly enough, Frank W. Hubbard, assistant executive secretary for informational services of the N.E.A., stresses the importance of this type of effort in that body's leadership. He cited copious evidence of the N.E.A.'s efforts at both the national and local levels to make available information about education - through the press, radio, films and television. That trends in schools have paralleled efforts by the N.E.A. seems no doubt to N.E.A. officials to be proof that this approach is being effective. This fact would be disputed, however, by certain other respondents.

The manner in which newspaper editors look upon spokesmen for various organizations is reflected by the following statement by Richard P. Kleeman, education writer for the Minneapolis Tribune:

It seems to me that whatever is said by anyone who purports to speak "for" education must be analyzed in the light of the biases of the particular individual or organization doing the speaking. Thus, for example, the National Education Association can be called a dependable spokesman for its particular point of view — but this doesn't make the American Federa-

(Continued on Page 160)



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Better Things for Better Living . . . through Chemistry



(Continued From Page 158) tion of Teachers, as a union, or the Council for Basic Education, Inc., as a critic, any the less dependable: They merely have to be understood and - speaking as a news-paperman - explained to the public for what they are.

Professional groups are defenders of orthodoxy. Henry H. Hill, president of George Peabody College for Teachers and immediate past president of the American Association of Colleges for Teacher Education, an affiliate of the N.E.A., points to what may be one reason professional organizations are not more effective in their impact on the general public:

I have been a bit bothered by what seems to me the fact that the A.A.C.T.E. and other educational organizations have been too defensive. By that I mean they don't quite realize that the same individuals who a generation ago were young Turks, leading the fight in favor of progress, are now resisting what is peddled as progress. . . . In other words, the old heterodoxy becomes the new orthodoxy.

The tendency for the liberals of one generation to become the con-

servatives of the next is not confined to education. Nevertheless, it raises the question as to whether our pioneer professional organizations of vesterday - two of which were certainly the John Dewey Society and the Association for Supervision and Curriculum Development - have in fact become the reactionary groups of the present. Should such be the case, their apparent lack of influence on a public which believes that schools of the past are inadequate to meet present educational demands can be readily explained. Such a reversal, from experimentation to defense of the status quo, would account in part for the fact that most of the criticisms of education and suggestions for changes in schools have come, of late, from outside the profession.

Leadership of individuals is quite limited. Without doubt. Dr. Conant is the best known and most respected spokesman for education on the national scene, particularly at the junior and senior high school levels. He has captured the confidence of knowledgeable laymen as well as of most professional educators. The only other name that these respondents think would be known by even a sizable minority of citizens who follow educational developments is that of Vice Admiral Hyman G. Rickover. Mr. Caswell comments:

Of the big-leaguers, Conant and Rickover are clearly outstanding in entirely different ways.

Rickover attacked from his position of great strength as the top navy officer and scientist in a time of panic over Russian scientific success, and shocked millions of people out of apathy. His is an angry voice of the urgent need to survive.

Conant's great professional prestige has been broadened by millions in his recent studies of the high schools and junior highs. His is a voice of honesty and hope.

Virtually all reactions to Dr. Conant were positive and confident, while most people expressed some reservations about Rickover's views in the field of education.

Other individuals mentioned as enjoying the respect of segments of the public include: John Gardner, president of the Carnegie Corporation; Warren Weaver, until recently of the Rockefeller Foundation: Paul Wood-

(Continued on Page 162)



Buckstaff Library Installation . . . Auburn Senior High School, Rockford, Illinois

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Apple cores, pencils or books can't be dropped through the top to damage interior of the Everett school piano. The top locks from the back and opens only with a special key. The keyboard, too, can be protected from mischievous hands. It locks at both ends when the piano is not in use. These "two extra keys" of the Style 11 are just two of many reasons why Everett is the overwhelming choice where reliable performance is demanded. More than 7,000 schools, churches and universities have chosen from 1 to 54 Everetts. Write for Style 11 Report and name of nearest dealer. Everett Piano Company, South Haven, Michigan.



two extra keys



EVERETT

style 11 school piano

(Continued From Page 160)

ring; Lawrence Derthick; Frank Keppel, dean of Harvard's school of education. Arthur Bestor was mentioned by one respondent as a critic who, along with Rickover, rendered the country a service by making people mad and curious, even though his criticisms were general and incomplete and he offered inadequate corrective measures.

An interesting aspect of Dr. Conant's image as a spokesman for education is related to his cross-country tours during which he met with local leaders in state after state to talk with them about the problems of their high schools. These personal meetings brought him into contact with people who became identified with him personally, who saw him as a man deeply concerned as are they with the critical educational problems of the times and one in sympathy with local views.

None of the individuals mentioned, with the exception of Dr. Conant, could be called a spokesman for education. Several reactions to Dr. Woodring, however, as a frank, learned and moderate analyst, and one who has access to a nationwide audience, indicate that he may be achieving increasing acceptance as a dependable spokesman for education. His editorial contribution to the Saturday Review "Education Supplement" may well have the effect of influencing education at the local level since those readers will include many who are the opinion makers in their respective community. The effect of this type of influence has been demonstrated over the years by the education section of Time magazine.

Nine tentative hypotheses suggested for study. As stressed in the introduction, this attempt to ascertain who speaks for and is being heard on public education today cannot be defended as a comprehensive and conclusive study. It has revealed the judgments of a selected jury of able and informed experts on public opinion which suggest certain tentative hypotheses that might well be studied more extensively.

1. The question of who speaks for education must be answered in terms of who speaks in understandable terms to the public at large (i.e. via newspapers, popular magazines, books, radio, television or personal appear-

(Continued on Page 166)



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EASIER TO OPERATE



Simplified controls leave the teacher free to teach and the student free to learn. Both are relieved of undue preoccupation with mechanical problems. The teacher can play lesson tapes, monitor or talk to individual students, small groups or the entire class—all with fingertip controls

that indicate settings clearly. The mechanical operations soon become automatic to both teacher and student. Simplicity makes it possible to use student assistance if desired.

NO TAPE HANDLING PROBLEMS



Instant tape handling is provided by the Electrofonic cartridge system. Threading is automatic when the cartridge is inserted in either the teacher console or student unit. There is never any rewinding. Tapes are automatically set for the beginning of the next les-

son. Even new students can operate recording and tape playing equipment quickly, leaving more time for learning. Teachers find it easy to record and duplicate their own lesson tapes.

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Full range reproduction is important in foreign language learning. The Electrofonic system is "hifi" throughout, including student microphones and headsets. Students hear and learn to use all the overtones and fine shadings of tone that are present in accurate, native pronunciation of a foreign language.



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(Continued From Page 162)

ances); who is so in tune with local anxieties and controversies about education that questions raised and suggestions offered attract attention; who establishes and retains public confidence as an informed, objective spokesman without allegiance to a vested interest group.

The critic is more widely heard than the defender of the educational status quo.

3. The gadfly type of critic performs a useful function in alerting the public to educational problems, but, like his insect analogue, is soon brushed aside in favor of more moderate and respected leadership.

4. Few, if any, pedagogues are recognized as spokesmen for education to the public at large. They, as often charged, tend to write and speak to each other in language that the public does not understand. Occasionally a college administrator, professor, superintendent of schools, or a teacher makes an impact on public opinion about education within his small area of operation. Rarely, how-

ever, do they reach a nationwide audience.

5. Professional organizations speak mostly to their own membership. Their force in shaping opinion about schools is indirect in that it operates through the effect the organizations have on educational personnel on the local level who may in turn influence local attitudes toward schools.

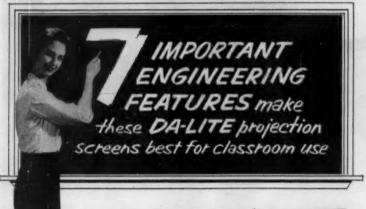
6. There is some evidence to suggest that the public is looking more to individuals and institutions that are engaging in research and experimentation on educational problems for leadership to strengthen schools.

7. There is some evidence that some philanthropic foundations, notably Ford, Carnegie and perhaps Kellogg, are helping to shape the direction of education.

8. Dr. Conant is the best known and most respected spokesman for education on the national scene today. His impact is thought to be due to his stature as a man of keen intellect and devoted commitment to education in a democracy, as well as to the fact that he has over the years apprenticed himself to the careful study of problems of public education.

9. Leadership for education in the United States, in contrast to certain foreign nations in which the minister of education can speak for all, will continue to be diverse and decentralized for as Harold Spears, superintendent of schools, San Francisco Unifield School District, said: "We are not conditioned to central authority and consequently not to central leadership."

These propositions reemphasize the importance of local leadership for educational programs. They call attention as well to the fact that professional educators need to learn to communicate directly with people if they are to influence education. The fact that attitudes toward schools (and educational emphases and procedures) are built up at the community level by the influences of a variety of people related to schools attests to the importance of continuous and sound programs of public information about schools, their objectives, procedures and effectiveness. In effect, the battle for excellence in education will be won in the local communities across the nation by a people who believe in working out their own educational destiny.



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Case adjusts from low at tripod leg
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Even largest size at highest case position
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Student Discipline

(Continued From Page 74)

monitors could be taken under their jurisdiction. This was done in January 1957.

Because there had not been an effective plan for penalizing students violating the hall regulations, cooperation of the student body was at a low ebb at that time. While on duty the monitors themselves were possibly the worst offenders. S.S.S.H. was then revised and called S.S.O. (Student Service Organization). Study halls and monitors were two separate branches being coordinated through the executive board headed by a chairman of S.S.O., a head supervisor of monitors, and a head supervisor of study halls.

The first step was to drop all of the old monitor staff. As far as possible, the previous monitor supervisors were retained, and they selected their monitors from applicants having a study hall during their period. Monitor complaints were issued to monitors who themselves violated corridor rules, with three automatically bringing up their names before the monitor committee for possible dismissal from the system. This action went a long way in solving the monitor problem. However, it was not until the next school year that a strongly disciplined corps of monitors was developed.

In order to control student conduct in the corridors, monitors issued "hall warnings" to those who violated school rules. After three of these were issued to a student, he was called in for a conference with the assistant principal. If the student was in general good standing and the corridor offenses were minor, he was cautioned. If the violation was serious or the student had repeatedly violated the rules, he might be temporarily suspended.

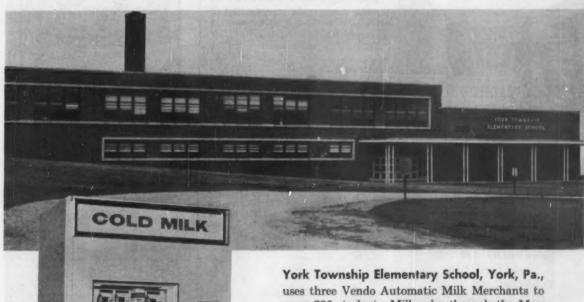
Last year 20 monitors were stationed at strategic points in the corridors, especially near the exits, each of the seven periods in the day. There is no faculty supervision of corridors. The four one-half hour lunch periods present the most problems. The other periods are relatively quiet.

Handling Lock and Library Services. A minor problem at Niles, nevertheless an irritating one, has been the tendency of students to leave their lockers unlocked. The administration sought to educate the students on the importance of locking their lockers by having a faculty member spend several periods a day tagging lockers that did not have locks on them or that were left unlocked. In 1957-58 the administration asked S.S.O. to assume this responsibility. At about the same time a request came to S.S.O. to assist the librarian in

(Continued on Page 170)

Vendo report on Milk Vending

in schools across the nation



York Township Elementary School, York, Pa., uses three Vendo Automatic Milk Merchants to serve 795 students. Milk sales through the Merchant average 8,880 half-pints monthly. Warners Dairyland of Red Lion, Pennsylvania, serves the

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Student Discipline

(Continued From Page 168)

taking roll, checking the students in and out of the library, checking books, and monitoring the doorway to the stacks in the library balcony.

As a result of these requests, a third and parallel division of S.S.O., called the Special Service Division, was established to handle lock and library services. All lockers are now checked twice weekly for the following irregularities: (1) lock missing; (2) lock unlocked; (3) lock fastened on the handle rather than the hasp; (4) door jammed so that it will not lock, and (5) miscellaneous.

If an irregularity is observed, a Lock Warning is sent to the occupant through his homeroom. When a second violation is turned into the S.S.O. office, the S.S.D. head secretary sends the notice to the assistant principal, who then calls the student in for a conference. This usually results in a warning that the next Lock Warning will bring a fine.

Quite a few Lock Warnings were issued the first month of checking, but they soon dropped off. Under no circumstances are student S.S.D. officers permitted to open lockers.

Study Hall on Honor System. Another experiment was started in September 1958, an "honor" study hall. During the last period of the day a study hall of 30 students in one classroom was organized with no disciplinary officer in the room. Students considered for membership in the honor study hall were screened by the faculty and the S.S.S.H.

They were rated on maturity, reliability and cooperation. The only officer in the room is a secretary, elected by the membership of the honor study group, who issues passes and takes roll in accordance with school regulations.

It is hoped that eventually one honor study hall will be held each period of the day. One of the big problems will be to educate the student body on the idea that students are put "on their honor" to show that they are mature enough to live up to the school study hall regulations without student or adult supervision. At any time the supervisor should be able to walk into the room and find all students abiding by the school rules.

Many students have the idea that the school is "trusting" them in an honor study hall, and, therefore, the faculty and S.S.S.H. are on their "honor" not to observe them so that they can do as they please. Under this interpretation the teachers have the "honor" while students have the "system."

At the end of this semester the honor study hall program will be carefully





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"Honeywell's ClockMaster to set we chose



Superintendent of Schools Olson, in Washburn Elementary School library. The "slave" clock on the library wall is corrected every hour by the master clock. In the event of a power failure, each clock will automatically be synchronized with all the other clocks when power is restored.

System is so easy it for all four schools"



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In each of the four new Bloomington schools, the master clock is located in the principal's office, with "slave" clocks in classrooms, the auditorium, cafeteria and library. Master time and master signal units are positively linked so they can't get out of step. And every clock reads the same—every bell rings at the same time—because the master clock automatically checks all the "slave" clocks every hour.

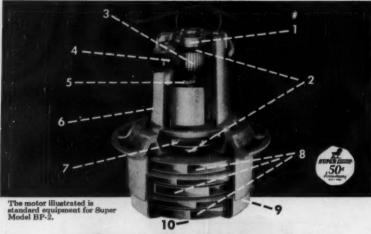
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Mr. E. H. Boegemann, principal of Washburn Elementary School, setting the ClockMaster System located in his offices.

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only Super has it!

- 7. Steel Bearing Housing . . . Bearing is housed in steel instead of aluminum motor frame. Housing expands under heat at same rate as bearing, eliminating "play" around the bearing. If bearing fails, only housing needs replacing, not complete motor frame.
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- 8. Suction Fons . . . Almost twice as much blade depth and blade area allows air to pass with maximum efficiency without back pressure or turbulence.
- Fiberglas Fan Cases . . . Non-rusting, non-corrosive, easily removed when necessary to service armature. Other motors use aluminum or steel which wold together under attack by cleaning solutions.
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A.A.S.A. in Philadelphia

(Continued From Page 81)

it has become more fluid in the sense that there is more movement from one class to another, greater "vertical mobility." By good fortune or by his own efforts a person may rise one or more rungs: education is the royal route to success here, he remarked. The person who does not rise is not necessarily stupid. He may have "learned from his social maze not to want to be anything more than he is."

Digging for Talent. No institution can do more to teach men the truth about one another than the public schools of America. Thus, they are in a position to help solve the problems of the world. This was the evaluation of Calvin E. Gross, superintendent at Pittsburgh. A considerable part of Dr. Gross' "analysis" of the Warner address was devoted to the subject of searching out hidden pupil talent.

Said Dr. Gross: "One of the great mistakes we now make is to begin looking for talent after most of it has slipped through the seive. Of the National Merit Scholarship awardees, 98 per cent were going to college anyway. If they can pick up only a dismal 2 per cent at the senior level, wouldn't we find many, many more if we looked carefully and systematically in Grades 3 and 4, or even earlier? It is among people who have had limited cultural advantages where we should find it most rewarding to do our prospecting for new and hidden talent."

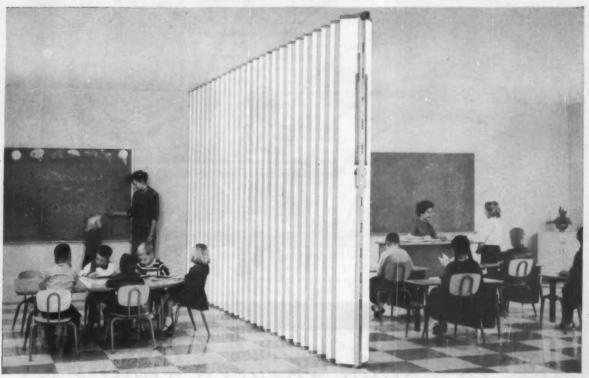
Supt. Gross urged this, although to provide equal opportunity for children who are at a cultural disadvantage requires a greater than equal application of resources.

Referring to a school with an average I.Q. of 88, Dr. Gross insisted that the intelligence level here was more nearly 100, and that something had happened to those missing 12 points, "something over which educators might just be able to exercise some control." The trouble may be that the talent we have is not being properly developed, he concluded.

Four Wise Men. Once again the panel on education in other nations offered its observations at one of the general sessions. (See report on St. Louis A.A.-S.A. convention for details. The substance of an interview with the four-man team — Abdul Majid Abbass, C. E. Beeby, T.H.E. Chen, and Hans Reimers — will appear in a coming issue of The Nation's Schools.)

"Local Control Is Folklore." "Under today's conditions, can this nation afford to allow any geographical area to con-(Continued on Page 177)

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354/4000 cps av. (Industry Standard)	41.8	35.8	36.4	33.0
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Sealer Strips	8	8	4	4
Foam-Lined Jamb-Seal	yes	yes	no	no
Air Release	yes	no	no	no
Pull-In Latch	yes	yes	00	no
Best Fabric Weight— Outside Covering Only	45 oz. per lin. yd.	45 oz. per lin. yd.	18 oz. per lin. yd.	27 oz. per lin. yd.
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(Continued From Page 174)

tinue to take a 'pauper's oath' as the excuse for providing only mediocrity in education?" asked Thomas D. Bailey, Florida state superintendent of public instruction. "Should there be any geographical area in America where it is an educational liability for a child to be born and thereby be sentenced to poor or mediocre educational opportunities?"

Dr. Bailey said that local control of education as our forefathers knew it has been in certain respects obsolescent for some time. The N.D.E.A., foundation subsidies, accreditation standards, and college entrance requirements have determined to an extent what is taught in schools, and even state athletic associations have removed "absolute decisions" from the local scene, he observed.

What is really needed, Dr. Bailey declared, is groups of citizens at the local level wielding much influence on both state and federal legislation. The trend, he believes, points to a realistic, cooperative partnership of local, state and federal governments in making quality education possible. This can be achieved, Dr. Bailey predicted, without surrendering important values that are inherent in the participation of motivated citizens in developing their local schools to the optimum.

Eight Steps to Good Morale. High quality teaching is not likely to result when staff morale is low, said Richard Wynn, associate dean, school of education, University of Pittsburgh.

Dean Wynn listed these eight means of achieving better day-to-day relationships between the administrator and teachers: (1) Let teachers participate in planning and decision making; (2) give dignity, status and recognition to the teaching position; (3) make the teacher feel he is part of the social group; (4) give feeling of security; (5) make advancement possible; (6) allow a reasonable degree of freedom in the work; (7) have efficient communication, and (8) provide attractive, physical working conditions.

Twelve Administrative Objectives. Building on the determinants of morale supplied by Dr. Wynn, Walter A. Anderson made a round dozen of suggestions for administrative behavior that will improve teacher morale.

The dean of the school of education of New York University offered these guideposts: (1) Give leadership in establishing clear emotional objectives; (2) delegate explicitly and completely the needed authority to carry out the program; (3) stress human relationships in the administrative process; (4) set up committees which will permit personnel to share in policy making; (5) urge teacher associations to participate con-

(Continued on Page 204)



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NEWS IN REVIEW

Dismissal of Topeka, Kan., Superintendent Was Unreasonable, Says A.A.S.A. Committee

TOPEKA, KAN. — A special committee appointed by the A.A.S.A., which investigated the dismissal March 13 of Wendell Godwin, superintendent of schools here, has called the action "legal and within the authority of the board," but said that the procedure was "abrupt, unreasonable and in violation of ethical personnel practices."

The Kansas Association of School Administrators and the Kansas State Teachers Association had requested the investigation. Members of the special committee were Forrest E. Conner, superintendent, St. Paul, and immediate past president of A.A.S.A., chairman; Mrs. Funston Eckdall, member of the board of education, Emporia, Kan.; Richard B. Kennan, executive secretary, Commission for the Defense of Democracy

Through Education, N.E.A.; James Redmond, superintendent, New Orleans, and Homer Wadsworth, vice president, board of education, Kansas City, Mo.

Mr. Godwin, who has been a member of the A.A.S.A.'s executive committee for the last five years, came from the association's St. Louis regional meeting for a special session of the board of education and was dismissed at that time, effective August 7.

He had been notified on March 8 by the president of the board, Merrill Werts, that it had decided against renewing his contract. About the suggestion that he might prefer to resign, Mr. Godwin said:

"I could think of no good reason to resign and decided not to do so. When (Continued on Page 188) ent, Denver public schools, in his remarks emphasized people ("the indispensable and least discussed factor") for "producing" quality in the secondary schools.

To accomplish the "essential task" of providing "distinguished teachers," he suggested providing better incentives for more of the most capable people to prepare for teaching; strong basic salary schedules and other benefits comparable to those of other professional groups, adding financial compensation for the most distinguished teachers who remain in the secondary schools; better utilization of teachers' talents, and a longer working year.

The association held a special session on the use of testing as a tool for achieving quality education. Clyde Vroman, director of admissions for the University of Michigan and chairman of the association's Commission on Research and Service, warned against "coaching" of high school seniors for college admissions and scholarship tests. "This isn't a game that should be beaten," he said.

North Central Association Asks 'Top Education' for All

CHICAGO. — If secendary education is to be superior, "it may not avoid the challenge of attempting to quicken the esthetic, moral and intellectual interests" of all students.

Speaker was Robert H. Beck, professor of history and philosophy of education at the University of Minnesota, Minneapolis, who, along with other panelists, talked about the meaning of quality in education at the 66th annual meeting of the North Central Association of Colleges and Secondary Schools here.

He continued: "Tell me that only the

bright students can be offered a superior education and I will reply that this view of education is a view of teaching. My view has students *learning*, all of them. The teacher is a Platonic midwife, not a steam table in a cafeteria."

Dr. Beck urged "the great foundations" to "unbelt" for projects in teaching even though they do not promise to show how 300 students can be taught by an unassisted teacher.

"Not all education is a matter of mastering the units of information or the increments of skill in computation structural linguistics a machine can present and monitor."

Kenneth E. Oberholtzer, superintend-

N.S.B.A. Will 'Face Issues' At Convention This Month

Philadelphia. — Educators and laymen will discuss national problems with which locally controlled schools must deal when the National School Boards Association holds its annual convention here May 4 to 6. Some 5000 school board members are expected to attend the meeting.

A workshop of the delegate assembly, the policy making body of N.S.B.A., will be held on May 3.

U.S. OFFICE OF EDUCATION READYING FOR MOVE TO NEW QUARTERS



NEW HOME of the U.S. Office of Education in Washington, D.C., is a seven-story, granite and limestone structure, with underground parking facilities. Erected by the General Services Administration, the building

is expected to be ready in July. It is located on Independence Avenue, west of the Health, Education and Welfare building. Architects are Faulkner, Kingsbury & Stenhouse, and Chatelain, Gauger & Nolan.



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N.E.A. Departments Face 'Realities' at Joint Meeting

ATLANTIC CITY. — Two of the N.E.A.'s largest departments — the Department of Elementary School Principals and the American Association for Health, Physical Education, and Recreation — held their annual conventions here March 17 to 22. Combined attendance was about 8000.

Taking its theme from an Educational Policies Commission publication, D.E.-S.P. explored "Contemporary Issues in Elementary Education," and emphasized the topics of realities of society, learning and practice.

Keynoter Paul Hoffman, managing director of the United Nations Special Fund, addressed a joint session on the realities of international tensions. He said that "if we had only realized back in 1950 that it is the human resources — the people — on whom we must concentrate if we are to help the underdeveloped countries, we would be further ahead today."

Mr. Hoffman pointed out that "education and technical training must go on in advance of significant economic development."

Another highlight of the conference was the presentation of the filmstrip "Guidelines for Decision on Issues in Elementary Education." It portrayed the effects that present-day tensions and pressures have on the teaching-learning process.

At an assembly meeting, Dan Lacey, managing director of American Book Publishers Council, Inc., told the elementary school principals that education in elementary schools must not stop at measuring up to today's needs; it must face toward the Twenty-First Century.

Robert Langerak, chairman of the department's committee on college and university relationships, urged elementary school principal groups to step in to help professors of elementary education and education school deans understand the importance of standards for elementary school leadership positions.

New president-elect of the department is Marion Cranmore, principal of Burns Park School, Ann Arbor, Mich. She succeeds Martin Tate, principal in Phoenix, Ariz., who became president. New vice president is Orville B. Aftreth, principal, Motley School, Minneapolis.

A message to A.A.H.P.E.R. from President Kennedy was read at the association's 76th annual meeting, attended by physical education teachers, health and medical specialists, coaches and sports leaders. It referred to the association's theme: "The Pursuit of Excellence."

"Our pursuit of excellence in government, science, business and other areas (Continued on Page 183)

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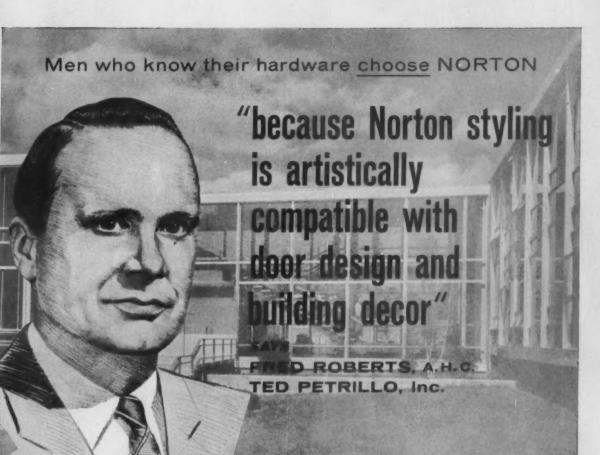


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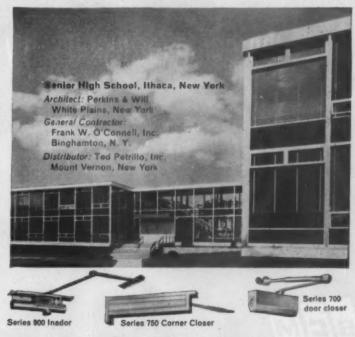


Your builder's hardware consultant is a good man to know. His esthetic tastes and technical skills assure you of hardware for your building that is compatible with design and function. The next time you have a hardware problem, consult him.

"Increased awareness of owners for the final appearance of their buildings has given hardware consultants and architects an opportunity to provide hardware that compliments their surroundings. When it comes to door closers, I always recommend Norton. Norton's reputation for quality assures me of dependability. Norton's consciousness of styling assures me of closers that are artistically compatible with door design and building decor."

Norton's appreciation of the importance of styling is carried throughout Norton's complete line of door closers. This styling made it possible for Mr. Roberts to supply "artistically compatible" Norton door closers throughout the new Senior High School in Ithaca, New York.

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the compact electric by Smith-Corona





A teachable office electric at the price of a manual.

Never before has there been a teaching typewriter like the new Smith-Corona Compact 200. Never before a true office electric at the price of a manual!

The Smith-Corona Compact 200 is a full-featured electric office typewriter. Yet it's compact . . . just half the bulk of conventional electrics. In one compact package you get a teaching tool with a full-sized electric keyboard . . . full-sized carriage with automatic return . . . automatic repeats. Here is everything you need to teach electric typing effectively and easily. No discipline hazards. No frills. It's simplified!

Of course, it's important today to teach electric typing, because modern business calls for typists familiar with electric machines. And in school or out, there is no electric typewriter more economical, more efficient than the new Smith-Corona Compact 200.

See this new kind of teaching typewriter at work in your classroom. Just contact your Smith-Corona representative for a demonstration. And ask about the complete portfolio of teaching aids available without obligation.



(Continued From Page 180)

of American life is closely related to and largely dependent upon the physical, mental and moral strength of our people.

"Leaders in school, college and community health, physical education, and recreational fields are in key positions to give new directions to millions of our citizens in their pursuit of excellence on all fronts."

Matthew Gaffney, associate with James B. Conant on "The Study of the American High School Today," said that while he is impressed by the fact that physical education programs in the schools have come a long way in the last 50 years, he is still alarmed over the ways some communities block efforts to improve these programs in the schools.

Glenn A. Olds, president, Springfield College, Springfield, Mass., urged that physical education programs be relegated to a "rational and responsible place" in celation to an individual's other activities in college. He also called for the development of new sports that "appropriately reflect our growing knowledge."

New officers of A.A.H.P.E.R. are: president, Arthur S. Daniels, dean, school of health, physical education, and recreation, Indiana University, Bloomington, and president-elect, Anita Aldrich, director of elementary and secondary girls physical education, Kansas City, Mo.

University of Chicago Names Reading Research Professor

CHICAGO. — Helen Robinson of the education department at the University of Chicago has been appointed as the William Scott Gray research professor in reading at the university. Mrs. Robinson came to the university in 1931 as superintendent and psychologist in its orthogenic school. She became director of the university's reading clinics in 1944.

Classroom Shortage Increased Last Year

Washington, D.C. — During 1960 the national shortage of public school classrooms went from 135,200 to 142,100, according to a recent U.S. Office of Education report.

The fact that figures came from local superintendents rather than estimates by states may account for part of the increase, the Office said.

The Office's survey states that 69,400 classrooms were built last year; about the same number was built the previous year. In 1957-58, however, 72,100 were built

There are more than 1.8 million pupils on half-day schedules or in crowded classrooms, or both, summarized the U.S.O.E. publication.



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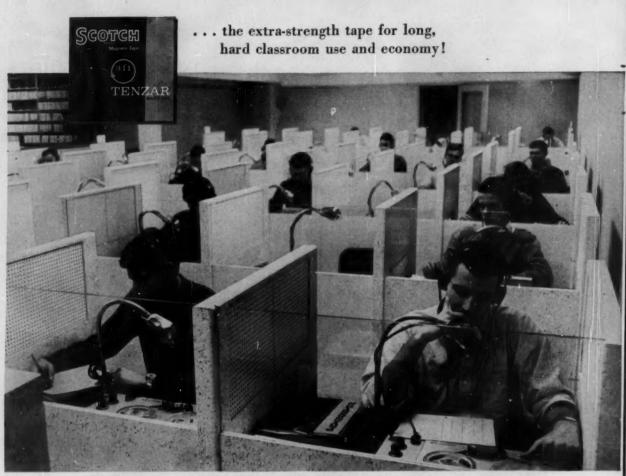
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42-booth language laboratory at Princeton University provides each student with individual "play" and "record" equipment. Each booth is also connected with instructor's console.

VOLUNTARY STUDY WITH THE AID OF MAGNETIC TAPE INCREASES USE OF PRINCETON'S LANGUAGE LAB BY 50%!



Professor A.T. MacAllister, director of Princeton's Sterling Morton Language Laboratory, is shown at instructor's console. Instructor can tune in any booth in lab, menitor student's work, correct diction through intercom book-up.

"At any stage of language learning and especially in the beginning, the more correct language a student hears, the better his learning will be," reports Archibald T. MacAllister, professor of Italian and director of the Sterling Morton Language Laboratory at Princeton University.

STUDENTS AGREE-500 HOURS!

Voluntary extra work by students increases the use of Princeton's tapeequipped laboratory by 50%. Of the 1,500 student-hours utilized each week, as many as 500 are used by students for voluntary language study.

Most of the remaining time is used for required lab work which supplements conventional classroom instruction in French, German, Italian, Portuguese, Russian, Spanish, Swedish, Arabic, Persian, Turkish, Chinese and Japanese.

BOOTH ISOLATION INCREASES STUDENT CONCENTRATION

"The language lab booths offer psychological isolation that increases student concentration and reduces

inhibition," according to Professor MacAllister. "It makes possible unlimited repetition without variation. and with the use of a magnetic tape library, permits different students to work at different speeds, allowing needed repetition for some without penalizing those who do not require it. The lab 'mirrors' the student's own pronunciation so that he can hear himself objectively."

FACULTY PREPARE TAPES

Most tapes, both for instruction and testing, are prepared by Princeton faculty members to make sure they relate directly to course plans. Exceptions include pre-recorded tapes of literary material and taped material for classes using texts written for lab use.

The lab procedure at Princeton is based on a library system with each student individually using magnetic tapes for listening and practice. About 5,800 rolls of tape are used in a year, including 4,300 on 5" reels and 1,500 on 7". And Scotch® BRAND Magnetic Tape No. 311, made with exclusive TENZAR® backing, is the tape that this lab uses most frequently.

WHAT IS TENZAR?

TENZAR backing is a special material used in making No. 311 tape that provides 16 times greater tear resistance than acetate backing! This extrastrength tape won't break when edges are nicked-withstands continuous play, fast stops and starts, even rough, inexperienced handling. It also stores unusually well-TENZAR backing provides 15 times greater humidity resistance than acetate!

For full fidelity, TENZAR backed No. 311 tape is made with high-potency



Students withdraw individual duplicate instructional tapes from library, follow their own best speeds for learning. Master recordings are kept under rigid security.

oxides. Exclusive Silicone lubrication protects recorder heads, eliminates squeal, extends tape life. This tape also provides classroom economy, because it's priced in the same range as standard tapes! For both economy and long wear, we suggest you specify "Scotch" Magnetic Tape No. 311 with TENZAR backing the next time you order tape. Available on clear or color-molded transparent reels in red, green, blue and vellow for easy coding, in either 5" or 7" sizes. Free in each box-end-of-reel clip that prevents tape spillage during handling, storing and mailing.

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"First the Ear . . .", an exclusive taped report prepared for 3M, lets you hear leading educators tell how magnetic tape helps them teach languages, both in high schools and colleges. This report, on TENZAR backed tape, is yours for only \$1.50. Send check or money order to Minnesota

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Ranking of States Reported; California Salaries Highest

Washington, D.C. — Oklahoma has the largest percentage of elementary school teachers with at least four years of college preparation; 99.7 per cent of them were so prepared last year.

More findings of the N.E.A. research division's "Ranking of the States, 1961" give other states a chance to boast.

California pays its classroom teachers more than any other state; \$6700 is the estimated average salary for 1960-61. Alaska is second with \$6600, New York next with \$6200. For the 50 states and Washington, D.C., the average yearly salary is \$5215.

From the 1959-60 to the 1960-61 school year, Kentucky had the largest per cent of increase in estimated average salary of the instructional staff — 26 per cent. For the 10 year period from 1950 to 1960, Kentucky was second in its increase of 103 per cent. First was Mississippi at 130.4 per cent for that period.

Highest percentage of revenue for public elementary and secondary schools from *local* governments is received by Nebraska districts — 91.4 per cent; from *state* government, by Delaware, with 79.6 per cent. Delaware receives \$389 per pupil enrolled in public schools from state sources.

Of the revenue for public elementary and secondary schools received from the federal government, Alaska's percentage is largest — 17.1 per cent; next is New Mexico, which received 13.5 per cent of its revenue from the federal government.

Pupils in Missouri attend school longer than those in any other state — on the average of 182.1 days — according to 1957-58 figures.

South Dakota had the lowest pupilteacher ratio in public elementary and secondary schools in 1959 — 18.1. Its average salary for classroom teachers is \$3675.

California has the highest per cent of population 25 years and older with at least four years of college — 8.1. The average for 48 states and Washington, D.C., is 6 per cent.

Twenty-seven and a half per cent of the total elementary and secondary school enrollment in Rhode Island attend nonpublic schools. Average for 48 states and D.C. is 13.1 per cent.

Citizens of Hawaii paid the highest state tax per \$100 of personal income in 1959 — \$8.64. Average for the nation was \$4.20. New Jersey's rate was \$2.18.

Over 28 per cent of Louisiana's population 25 years of age and older have less than five years of schooling, according to 1950 figures; only 3.9 per cent of Iowa's have.

Of Utah's population 25 years and

older, 48.9 per cent have at least four years of high school, as of 1950.

Copies of "Ranking of the States, 1961" may be obtained for 75 cents each by writing to the N.E.A., 1201 16th St., N.W., Washington 6, D.C.

Mounts Stop Signs on School Bus Semaphores

TOPEKA, KAN. — The state of Kansas has adopted use of reflective red stop signs for bus semaphore arms on school buses in an effort to provide increased protection for children boarding or leaving buses.

The 18 inch octagonal signs replaced the 8 by 18 inch yellow semaphore arms on all new school buses, effective Jan. 1, 1961. By September 1, they will be mandatory equipment for all 3500 school buses that transport 10 or more students, reports Harold Pellegrino, assistant director of safety of the state's highway commission.

The new semaphores were tested by five schools in western Kansas for a year. Early during the tests, school bus drivers reportedly noted improvement in motorist reaction to the signs; bus drivers who did not have them on their vehicles requested them.

Prior to adoption, the semaphores were approved by the traffic and safety department of the Kansas highway commission, superintendent of the Kansas highway patrol, and the superintendent of public instruction.

U.S. To Send 150 Teachers to Africa This Year

Washington, D.C. — Fifty experienced teachers, 50 recent graduates of teachers colleges, and 50 liberal arts graduates from the United States will go to Africa this year as a result of a conference sponsored by the American Council on Education.

Considered a test of the Peace Corps, the project is being conducted by Teachers College, Columbia University, which has signed a preliminary contract with the International Cooperation Administration.

The teachers now being recruited will serve in secondary schools in the British controlled territories of Uganda, Kenya, Tanganyika and Zanzibar.

Base pay and approximately half the transportation costs will be paid by the local African governments. The United States will pay the difference between the base salary and the prevailing rate for British teachers there, and the remainder of the transportation costs.

The United States will invest approximately \$1.5 million, including recruitment, training and surveys of facilities and requirements.

Sweet Home Central High School Eggertsville, New York

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School Storage Furniture for Food, Clothing, Science Labs . Arts & Crafts . Elementary Classrooms

(Continued From Page 178)

I asked why I had not been notified earlier, Mr. Werts stated that my deficiencies were of such nature that I could not correct them."

At the March 13 meeting, Mr. Godwin testified, there was an "indication of a desire and willingness of the board to employ me in some administrative position within my capabilities, in order to allow me to qualify for retirement." (He needed two years.)

But when the board adjourned, reference to that proposal had been omitted from the action.

According to Mr. Godwin, reasons the board gave for the dismissal, as they

appeared in news releases, are: "that the board has concluded that our school system simply does not have the strength of administrative leadership that it needs," and that "the job has outgrown him"

Upon request, Mr. Godwin received "evidence" in a letter of March 21 whereby the board reached its conclusions. The superintendent was told that he had an inclination to display a patronizing attitude toward those who are regarded as inferior intellectually, vocationally or otherwise; that statements have proven to be "ill-conceived with resulting embarrassment and/or unwise action in the absence of prior contradic-

tion by the board"; that "unnecessary fund cushions are being consistently budgeted and unwise discretionary authority in this respect delegated to those who submit requests," and that the board was aware of "an attitude toward the superintendent which reflects tolerance rather than respect."

The special committee spent March 30 and 31 here, interviewing the board members, the superintendent and other school administrators, officers of parent, citizen and teacher associations, and interested citizens.

While admitting that this amount of time made impossible a study in depth of the controversy, the special committee said that certain elements of the situation became apparent. In its view:

"The board did not give its chief executive adequate indication of unsatisfactory services, friendly assistance to improve, or reasonable warning of probable termination of contract arrangements.

"The statements that the board has made to the school staff and the public concerning the dismissal have been exceedingly vague and inept. The reasons given for dismissal in the . . . letter of March 21, 1961, are general and subjective in nature and reflect opinion rather than fact.

"The action of the board in this instance has had more widespread demoralizing effect than the board has so far comprehended. The board appears to have failed to recognize that the schools are not its private concern, and that the welfare of the schools is dependent upon the interest, confidence and support of an informed electorate."

The committee recommends that the board establish a systematic procedure for periodic evaluation of its administrative and supervisory staff and that such appraisal be in writing and discussed with each of the staff individually; that no qualified administrator accept the superintendency here unless and until he is given clear and convincing assurance that if his services become unacceptable to the board he will be given ample warning and an opportunity to correct any errors or shortcomings, and that the board and the superintendent join in developing a more extensive public relations program to keep the community informed and to restore confidence in the board and school administration.

It also recommends that the board honor its announced contractual arrangements with the present superintendent "in a manner that will not be demeaning to him or embarrassing to his successor."

Mr. Godwin has been superintendent in Topeka for 10 years. Previously he had been superintendent in Hutchinson, Kan., and La Porte, Ind.

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West announces Nevamar, the new resin finish guaranteed to outlast the product you now use

New Nevamar is one of the latest research developments in polymer chemistry. It offers these unique time and labor-saving properties:

The gloss is not just a surface gloss; it goes all the way *through* the finish. Dirt and grime cannot penetrate it, cause it to dull, darken, or fade.

In heavy traffic, it requires no more maintenance than occasional sweeping.

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West Chemical Products guarantees Nevamar will produce a more durable finish than the product you now use. Every user gets a bonded guarantee, in writing:

If, after following the simple recommendations for application and maintenance, your gym finish does not last longer than the previous product used—or should require additional finish coats within 1 year — West will replace the original amount of material, at no charge.

For an eye-opening demonstration of Nevamar finish and its companion sealer (there's a superior line-marking enamel, too) contact your

local West representative or mail coupon to: West Chemical Products, Inc., 42-16 West Street, Long Island City 1, New York.



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Plenty of Pittsburgh Polished Plate Glass means more natural light, less eyestrain for Finneytown High pupils.

This school was designed with eyesight

Wherever you look around the Finneytown High School in Finneytown, Ohio, there's glass—PPG Glass that lets in *plenty* of natural light, adds an extra measure of beauty to the buildings, and provides an ideal learning environment.

Two PPG Glass products play a big part in making this school the bright, spacious place that it is: Pittsburgh Polished Plate Glass and Pennyernon® Graylite™ 14 Glass. Polished Plate Glass is used in areas that demand maximum light transmission where natural light is essential. Pennyernon Graylite is used where glare is a problem. Gray-

LITE 14 is heat-absorbing glass that has a pleasing neutral shade which is undetectable to occupants, does not change outdoor colors, yet substantially reduces glare that can be so hard on the eyes. It helps keep the school cooler and more comfortable in warm months, too.

Inside and out, this is a modern, attractive school building . . . as beautiful as it is functional . . . thanks to glass from PPG. For more information on PPG products, write Pittsburgh Plate Glass Company, Room 1163, 632 Fort Duquesne Blvd., Pittsburgh 22, Pennsylvania.

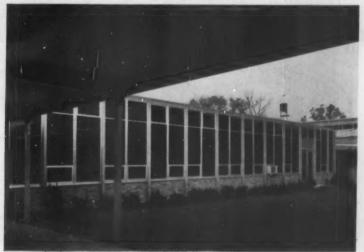


Finneytown High School, Finneytown, Ohio Architect: Woodie Garber & Associates, Cincinnati, Ohio Contractor: Holt & Reichard, Norwood, Ohio



Pittsburgh Plate Glass products enhance the appearance and help make the Finneytown school a pleasant place to attend.

PENNVERNON GRAYLITE 14 reduces the sun's glare and helps make this school a cooler and more comfortable building during the warm months.



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PPG Glass products for schools:

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the dampest air. And glides that automatically keep tables from wobbling. Find out about Bassick glides for your school.



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Expresses Optimism on Aid to Private Schools

ATLANTIC CITY. - "It will be a bad day for America, a sad day for education, if the 85th Congress decides it can give no aid or comfort to the cause of American education in schools which are desperately trying to keep alive a fervent love of nature's God as well as the knowledge of the laws of nature."

These are the words of the Most Rev. John J. Wright, Roman Catholic bishop of Pittsburgh.

Addressing the 58th annual convention of the National Catholic Educational Association held here April 4 to 7, he also said that "nothing the national administration has yet said should discourage our hopes for the future of education which includes religious idealism."

Some 12,000 delegates attended.

Educational Construction Up From Last Year

NEW YORK. - For the first two months of this year, the dollar volume of educational construction contracts in the United States, excluding Hawaii and Alaska, increased 13 per cent over the same period last year.

Total for January and February is \$409,280,000.

Figures appeared in the February issue of Construction Statistics published by the F. W. Dodge Corporation.

U.C.E.A. Elects **New Trustees**

COLUMBUS, OHIO. - New members recently elected to the board of trustees of the University Council for Educational Administration headquartered here are Calvin Grieder ("Administrator's Clinic"), University of Colorado; Howard Jones, University of Michigan, and Daniel E. Griffiths, Columbia University.

Better Paying Positions Draw Superior Teachers

New York. - "Significantly superior" men are leaving the teaching profession to take better paying jobs, according to a study made by Professors Robert L. Thorndike and Elizabeth Hagen, Teachers College, Columbia University.

Subjects of the study were 658 air force veterans, who entered teaching after World War II. Two hundred had left teaching for jobs that provided a 25 per cent improvement in their incomes. These had scored superior to the 458 remaining in teaching.

Chief reasons for leaving were low pay and better opportunities in other positions. "If conditions were improved," 75 per cent of the group indicated that they might return to teaching.





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A.C.E. Makes Proposals for Aid to Higher Education

Washington, D.C. — To improve the quality and increase the number of college teachers, the American Council on Education recently recommended a broad expansion of fellowship programs under the National Science Foundation and the National Defense Education Act.

The council also recommended federal loans of \$350 million annually for dormitories; an average of \$1 billion annually for loans and matching grants for classrooms, libraries and laboratories;

continuation and improvement of the student loan program of the N.D.E.A., and a new program of scholarships, beginning with \$25 million the first year.

An increase of at least a million fulltime students between 1958 and 1965 is anticipated by the council and another million between 1965 and 1970.

High School Sponsors First 'National Goals' Forum

OAK PARK, ILL. - Taking its direction from the report of President Eisenhower's Commission on National Goals, Oak Park-River Forest Consolidated High School staged the country's first invitational conference on national goals here recently. The national commission had set up 15 community meetings for March through November, sponsored mostly by universities throughout the country.

Kenneth W. Lund, superintendent of the Chicago suburban high school, believes, however, that high schools are a more integral part of the community than colleges and therefore initiated the local project. Administered by the school's adult education division, the invitational meeting was participated in by about 300 honor students and 800 adults — community leaders and parents of the students.

The all-day forum comprised 120 discussion groups, each of which was addressed by a student on one of the 15 major subjects highlighted in the commission's book, "Goals for America." Both adults and students were assigned to each group. All had been asked to study the publication beforehand in an effort to help them address themselves seriously to the questions of national purpose.

Keynoter for the meeting was Gen. Alfred M. Gruenther, president of the American National Red Cross and supreme allied commander in Europe from 1953 to 1956, and a member of the President's commission. Other speakers were Gov. Otto Kerner of Illinois, and J. Russell Christianson, Oak Park village president.

Distributes Material To Help Parents Help Preschoolers

Valley Stream, N.Y. — To help prepare preschool children for school life, Union Free School District No. 30 here has compiled a packet of materials for purents. R contains a monograph on reading readiness, a speech booklet prepared by the district's speech department, a list of "Guideposts to Learning," a list of books suitable for reading to children, a list of pamphlets on child growth and development, and articles on reading readiness and preschool eye care.

Visitation days for upcoming kindergarten classes already by a pro-d sucful here. (1681—1) here, in less aller preparations can make all of a pupil's school like easier and better.



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MEDIUM Slats partially closed, give light enough for note-taking, yet darken room so projected slides of charts, etc., may be clearly viewed. Precision tilt mechanism with fine adjustment, affords exact degree of light needed.



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Keynoter for the meeting was Gen. Alfred M. Gruenther, president of the American National Red Cross and supreme allied commander in Europe from 1953 to 1956, and a member of the President's commission. Other speakers were Gov. Otto Kerner of Illinois, and J. Russell Christianson, Oak Park village president.

Distributes Material To Help Parents Help Preschoolers

VALLEY STREAM, N.Y. — To help prepare preschool children for school life, Union Free School District No. 30 here has compiled a packet of materials for parents. It contains a monograph on reading readiness, a speech booklet prepared by the district's speech department, a list of "Guideposts to Learning," a list of books suitable for reading to children, a list of pamphlets on child growth and development, and articles on reading readiness and preschool eye care.

Visitation days for upcoming kindergarten classes already had proved successful here. Officials here believe other preparations can make all of a pupil's school life easier and better.

This year, the district is sending the preschool packets to parents of three-year-olds only. After they have had time to read and apply the ideas presented in the articles, parents will receive evaluation forms to judge the effectiveness of the project. Their comments will determine whether the materials are modified or continued in present form for the future.





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Write for specifications to Bridgeport Brass Co., Hunter Douglas Division, 30 Grand Street, Bridgeport 2, Conn.

They Played Hookey? A study of the childhood of famous persons has revealed this: Most of them, as youngsters, did not like their schools or their teachers. Victor H. Goertzel, president of the National Association for Gifted Children, and Mildred George Goertzel, his wife and research assistant, are conducting the study of 77 eminent people. From the study so far, they have learned that creativity does not result from being reared in a warm, cohesive, supportive home although the humanitarians, women lawyers, and politicians were from such a home generally. Alfred Adler, Fred Allen, Sherwood Anderson, Clement Atlee, Bernard Baruch, Winston

Churchill, and Mark Twain are among those who have been studied.

Dethroned. Instead of carrying out a threat to strike because they were denied May Queen festivities, students at Lake View High School, Chicago, sent a letter of apology to the school's principal. "But," they said, "we feel it is unnecessarily cruel to penalize the entire school because of the discourteous and thoughtless actions on the part of a few." These actions consisted of harassing teachers and administrators with anonymous letters and telephone calls, according to Principal J. Trimble Boyd. The May Queen remains dethroned.

Coming Events

MAY

21-24. National Congress of Parents and Teachers, Kansas City, Mo.

JUNE

14-18. American Driver Education Association, Miami Beach.

18-22. National Association of Student Councils, Oklahoma City.

25-30. National Education Association, Atlantic City.

JULY

30-Aug. 3. American School Food Service Association, Denver.

AUGUST

20-26. National Conference of Professors of Educational Administration, Berkeley, Calif.

SEPTEMBER

29-Oct. 4. Department of Rural Education, N.E.A., Pittsburgh.

OCTOBER

2-6. National Council on Schoolhouse Construction, Atlanta.

NOVEMBER

22-25. National Council for the Social Studies, Chicago.

1962

FEBRUARY

14-17. American Association of Colleges for Teacher Education, Chicago.
17-21. American Association of School

Administrators, Atlantic City.

24-28. National Association of Secondary School Principals, St. Louis.

MARCH

4-8. Association for Supervision and Curriculum Development, N.E.A., Las Vegas, Nev.

25-29. National Science Teachers Association, San Jose, Calif.

25-30. Department of Audio-Visual Instruction, N.E.A., Kansas City, Mo.

26-30. Department of Elementary School Principals, N.E.A., Detroit.

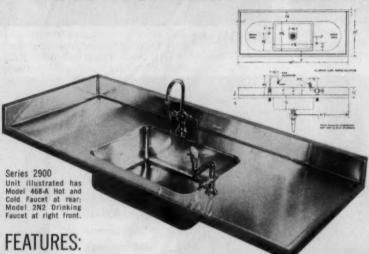
APRIL

15-18. National Council of Teachers of Mathematics, San Francisco.

24-28. Council for Exceptional Children, Columbus, Ohio.

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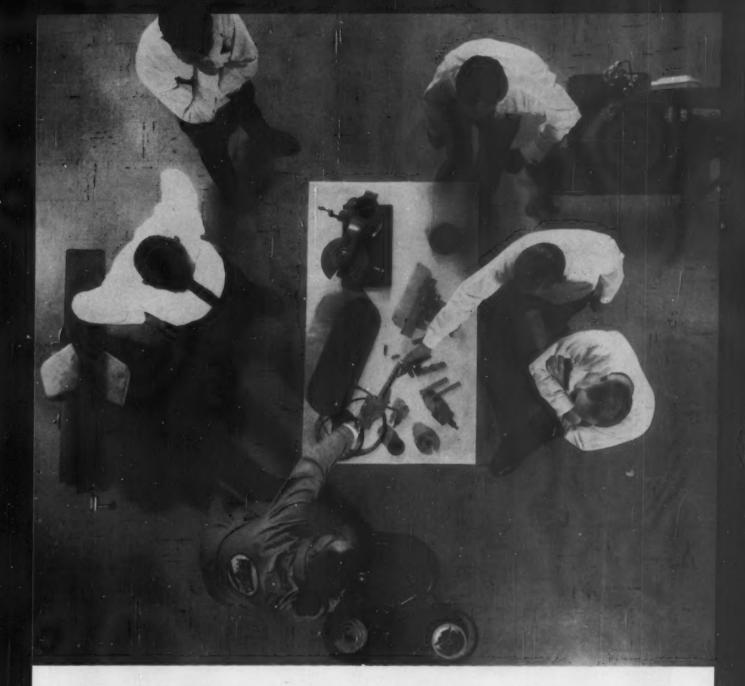
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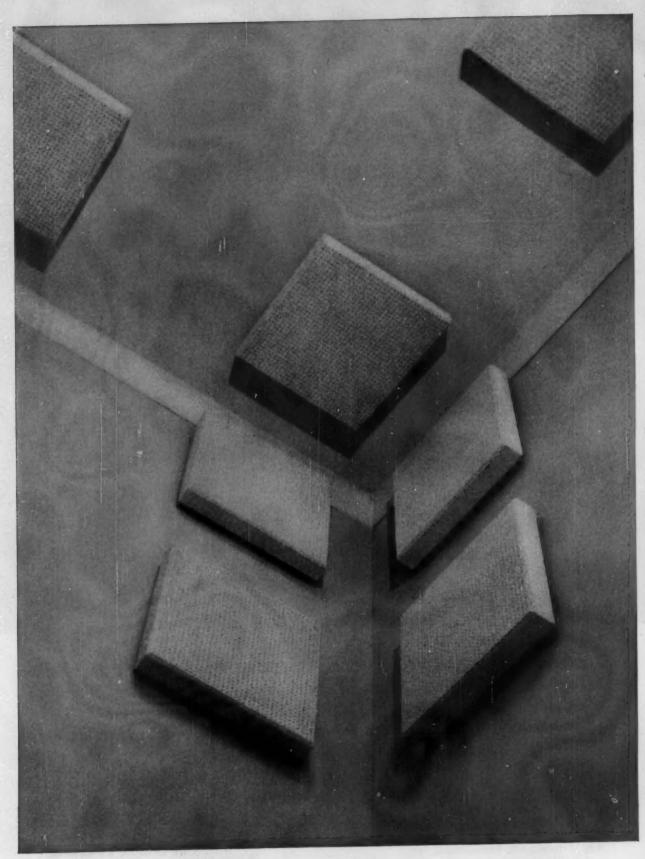
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The NATION'S SCHOOLS

a new product, GEOCOUSTIC, "lets us control schoolroom sound...not just deaden it"

... reports Mr. Everett D. Carlton, Superintendent of Buildings, Bloomington, Ill., School System

"Our results with GEOCOUSTIC in two old vintage elementary schools have been remarkable. The 'spirit' of the room acoustics has improved 100%."

This important change in 'spirit' is further described by Mr. Carlton in his comparison of the rooms before and after the installation of GEOCOUSTIC:

"Excessive reverberation, a sound disturbance akin to dissonance, and often, the poor intelligibility of the teachers' words were serious problems we'd faced. During a recent remodeling program, we decided to experiment with Pittsburgh Corning's new acoustical material."

After applying GEOCOUSTIC "patches" (see photos), Mr. Carlton and a colleague tested the rooms: "Where we previously had to raise our voices to be distinct and clear in the room, we found that we could now stand a full 30 feet apart, converse in an ordinary tone of voice without strain or tension, and be easily understood. We are extremely

pleased with GEOCOUSTIC because it has helped us gain an objective—the control of sound in an otherwise noisy classroom... a remarkable condition for both our teachers and students."

What is GEOCOUSTIC? It is both a material and a method. The material is a cellular glass unit measuring 13½ x 13½ x 2½. Its extremely high absorption efficiency makes the highly effective patch technique practical for room acoustics.

Mr. Carlton describes the difference in cost: "We completed 10 rooms in three working days. We've found a minimum of two weeks required with conventional acoustical materials for the same amount of work. The original cost is essentially the same, but the savings in labor costs are rather tremendous!"

Interested? Write for the name of your nearest GEOCOUSTIC contractor and a free copy of Mr. Carlton's full story. Pittsburgh Corning Corporation, Department AK-51, One Gateway Center, Pittsburgh 22, Pa.



Notice the application of GEOCOUSTIC patches in the important area of the room boundaries resulting in afficient sound control.







About People

Changes in Superintendencies

NORTHEAST

Willard A. Downie, Southern Berkshire Regional School District, Sheffield, Mass., to Greenfield, Mass., effective August 1. He succeeds Frederick W. Porter, who retires after 32 years as superintendent there.

Winston B. Keck, assistant superintendent, Central School District No. 4, Plainview, N.Y., to superintendent, Springfield, Vt.

Elmer S. Stevens, supervising principal, Northern Lehigh Joint School District, Slatington, Pa., to superintendent, Borough School District, Hanover, Pa.

Arthur F. Couch, junior high school principal, Secaucus, N.J., to superintendent there.

Theodore Schor, acting superintendent, Piscataway Township School District, New Market, N.J., to superintendent there.

John E. Dwyer, assistant superintendent, Elizabeth, N.J., to superintendent there.

MIDWEST

John R. Fitzsimmons, assistant superintendent in charge of instruction, Levittown, N.Y., to superintendent, School District No. 111, Oak Lawn, Ill.

Frederick J. Jappinga, high school principal, Haslett, Mich., to superintendent there, effective July 1. He succeeds H. M. Murphy, who retires.

Bernard F. Gaffney, high school principal, Portage Township School District, Houghton, Mich., to superintendent there, effective the end of the current academic year. He succeeds Irving S. Edwards, who retires.

Donald Scott, acting superintendent, Neenah, Wis., to superintendent there.

L. E. Law, acting superintendent, Alliance, Ohio, to superintendent there, succeeding Granville S. Hammond, who resigned.

Virgil E. Blanke, former superintendent, Napoleon, Ohio, to superintendent, Massillon, Ohio, effective August 1.

Guy F. Eberhart, Bristol Township and Delhaas Joint School District, Bristol, Pa., to Willoughby-Eastlake School District, Willoughby, Ohio, effective July 1.

Gail M. Grabill, Adams County, Decatur, Ind., to Decatur, effective in July.

Leland D. Melvin, Covington, Ind., to South Vermillion Community School Corporation, Clinton, Ind.

Harlan A. Schmidt, Hector, Minn., to Waseca, Minn.

Edwin C. Johnson, Westby, Mont., to Burke County, Bowbells, N.D.

SOUTHEAST

Milton S. McDonald, high school principal, Moultrie, Ga., to superintendent, Rome, Ga., effective July 1. He succeeds E. A. Crudup, who becomes administrator for the state's educational television program, Atlanta.

Harris A. Marshall, School District No. 5, Orangeburg, S.C., to School District No. 1, Florence, S.C., effective July 1. He was president of the South Carolina Association of School Administrators in 1945 and the South Carolina Education Association in 1955.

Irvin S. Maddy, high school principal, Moundsville, W. Va., to superintendent, Summers County, Hinton, W. Va., effective July 1.

SOUTH CENTRAL

Travis M. Roach, Rosebud, Tex., to Cisco, Tex., effective July 1.

Charles R. Zeigler, Oglesby, Tex., to Cameron, Tex.

WEST

Wilburn N. Ball, acting superintendent, Utah State Department of Public Instruction, Salt Lake City, to state superintendent there. Prior to joining the department eight years ago he served as superintendent of the South Summit and North Sanpete school districts. The vacancy was caused by the death last October of E. Allen Bateman, who had been state superintendent for 15 years.

Edward V. Murphy, former superintendent, Little Lake Elementary School District, Santa Fe Springs, Calif., to superintendent, Union Elementary School District, Escondido, Calif., effective July 1.

Ernest Forge, high school principal, Quincy, Wash., to superintendent there, effective July 1.

Other Appointments . . .

Emmett A. Betts, director, Betts Reading Clinic, Haverford, Pa., has accepted a position as research professor in psychology and education, graduate school, University of Miami, Coral Gables, Fla.

Arthur S. Flemming, former secretary of the Department of Health, Education and Welfare, has been named president of the University of Oregon.

Resignations . . .

I. Douglass Reade, superintendent, Hingham, Mass., since 1954, effective in September.

Edward K. Chace, superintendent since 1959, Moorestown, N.J., effective at the end of the school term.

Al N. Wurst, superintendent, Shakopee, Minn., effective September 1.

(Continued on Page 202)

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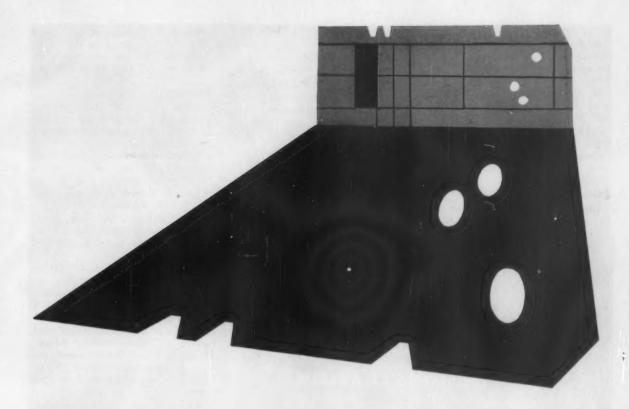
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NEW CONCEPTS IN PRACTICAL OFFICE AUTOMATION

(Continued From Page 200)

Ralph C. Glidden Jr., Union No. 47, Harvard, Mass., effective June 30. He has served as superintendent there since 1958.

M. J. Beiser, superintendent for 13 years, Eaton Rapids, Mich., effective June 30.

A. A. Brown, superintendent for 15 years, Littleton, Colo., effective July 1.

Thomas R. Bowman, superintendent since 1958, Kalamazoo, Mich.

Retirements . . .

Gladys Starbuck, superintendent for 12 years, Lowell Joint Elementary School District, La Habra, Calif., effective next month.

W. F. Johnson, superintendent for 21 years, Spencer, Iowa, effective June 30.

Ashby Weldon Kay, Goochland County, Goochland, Va., effective July 1, after 20 years as superintendent there.

Caryl E. Adams, supervising principal since 1944, Whitney Point, N.Y., effective next month.

Russell A. G. Stetler, superintendent, Matawan, N. J.

John C. McKenna, Evansville, Wis., effective June 30. He has been superintendent there since 1934. Russell L. Kressler, Lower Penns Neck, N.J., effective at the end of the school year. He began service with the district in 1928 as a teacher-principal.

Deaths . . .

Eldon Ready, 56, superintendent, Griffith, Ind., since 1956. Previously he had been a high school principal there for nine years.

J. C. Tate, 60, Pottawatomie County, Shawnee, Okla. He had been superintendent there since 1957.

John A. Holmes, 71, superintendent for 38 years, Edenton, N.C.

James H. Erwin, 70, retired deputy superintendent, Niagara Falls, N.Y. He had served in that post from 1945 until early this year.

Harvey A. Kuntzelman, 58, superintendent for 16 years, Dover, N.J.

I. S. Hinshaw, 81, former superintendent, Ada, Okla. He had served in that position from 1927 to 1933.

Charles W. Franklin, 51, superintendent for seven years, Salem-Washington Township School District, Salem, Ind.

A. B. Awalt, 56, Frankston, Tex. He had been superintendent there since 1950.

Chester C. Lees, 55, superintendent, Hinsdale Supervisory School Union No. 25, Winchester, N.H. He had been in that position since 1947.

Thomas A. Babcock, president of the Michigan Education Association, 1945-46.

Cooking for Credit. Chicago's public school system is conducting a vocational education experiment this year; it is offering high school juniors and seniors a two-year, tuition-free course designed to train young men for careers as bakers. The program was worked out by school officials and the Associated Retail Bakers of Greater Chicago. About 20 students receive three hours of academic work daily, plus three hours of study and practice in the fundamentals of baking.

Paperback Edge. A paperback novel boom has occurred at the community high school at Richmond, Mich., reports Supt. Alex M. Nelson. For 25 to 50 cents, students purchase new books from school's revolving book rack. All are classic literary selections, approved by the librarian and the English department. If the student returns the paperback in good condition, he may have another new one in exchange. Or he may keep it to build up his own library.

Marian Snitchler, the librarian, states that circulation has increased 50 to 60 per cent since the installation of the paperbacks.





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(Continued From Page 177)

structively in carrying out the program. Other roadmarks were: (6) Have effective means for commending good teaching; (7) encourage and support teachers and principals in carrying out forward looking projects; (8) adopt good policies for recruitment, orientation and evaluation; (9) make inservice activities challenging; (10) effect good two-way communication; (11) develop carefully procedures for evaluating teachers and teaching - with representatives of professional groups and, possibly, consultants, and (12) carry on regularly an objective study of the status of teacher morale, not just during a crisis.

Role of the Teachers College. What is the service role of the publicly supported college of education? This question was answered by Novice Fawcett, president of Ohio State University. He stressed that no more serious problem faces us than the need for clarity regarding our aims and objectives and the spirit in which we implement them.

Among the many expectations of the teachers college is that, as an arm of the state, it increasingly obligates itself to assist a growing profession as it defines its own standards of educational preparation and practice, the Ohio educator stated. Among the major responsibilities to be assumed is the preparation of

teachers equal to today's major tasks, he said, then continued: "Too often have we been willing to bargain for increased pay for teachers, technicians and clerks on the sole grounds of their experience and tenure rather than on their merit and effective contributions to the whole complex of educational responsibility. . . . Methodology and procedural patterns for the selection and preparation of teachers never again will be ade-

Twelve-Month School Year. In our complex society it is imperative that our public schools make available their resources and professional personnel for the entire year. This was the theme of the talk by Maurice J. Thomas, chairman, department of educational administration, University of Pittsburgh. With the acceptance of the principles of educating the whole child, it is only reasonable to organize a complete educational

program, he said.

A heavy burden is placed on the educational leadership by a year-round program, Dr. Thomas stated. But the chief factor in its success is the wholehearted support of the professional staff; it cannot be imposed from above, he said, adding: "With experience the weaknesses of any new program usually can be overcome. . . . With the broadening of the concept of summer recreational services, practically every teacher can be utilized within the framework of this specific part of a 12 month program. . . . As a rule, those teachers who are outstanding during the regular year make the best contributions during the summer months and assure the greatest return on the year-round investment."

"Education" of Grownups. Pressing issues in adult education were bandied about with spirit by a discussion group, chaired by Robert A. Luke, executive secretary of the National Association of Public School Adult Educators, N.E.A. Many superintendents still do not understand that this area is part of the over-all responsibility of the public school program, it was stated. In fact, adult education is a sort of scatter rug that is moved around as it suits the users. To be effective it needs to be woven into the tapestry of the whole educational program, it was stressed.

Other thoughts expressed included

Must all adult education be intellectual in order to be entitled to financial support? Does it necessarily have to take the form of formal classes, or should it be broad enough to provide for community service? When mines shut down or a factory closes, is it not part of the job of public schools of the community to retrain those who lose their jobs so they can move over into other fields? (Continued on Page 206)

better look again.



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(Continued From Page 204)
Under present restricted federal programs, it is difficult to get funds for such purposes.

Adult education, including training in vocational skills, is fast becoming a part of the curriculum of the junior community college. In some areas public schools are semiofficially sponsoring community councils dedicated to urban redevelopment. This is just as logical an activity as is that of the agricultural extension program.

What is badly needed is a basic policy document on adult education. It could perhaps be best prepared by the Educational Policies Commission. Role of the Architect. Good school planning comes with a high level of educational planning and considerable architectural comprehension, Architect John W. McLeod told a discussion group. Educational specifications should set forth the fundamental principles of a school's teaching and learning philosophy, the member of the Washington, D. C., firm of McLeod and Ferrara said.

Mr. McLeod indicated that for a superintendent to tell an architect, "You know what we want, go ahead and draw up some sketches," is akin to having him design an industrial plant without knowing whether breakfast cereals or automobiles are to be manufactured. Discussion by panel members and from the floor touched upon subjects such as the following:

School boards often are not brought along with the superintendent-architect planning, yet surprise is expressed when they do not approve automatically when confronted with the blueprints. Architects should be appointed early; in this way they will be able to benefit from what they hear in the various discussions. Space should never be carved up to meet the individualistic ideas of any one teacher or principal; the successor may have entirely different ideas and will blame the architect for not designing competently — the crowning blow.

Other thoughts expressed: While the school is the buyer, the architect should have the privilege of registering objections to procedures which violate his professional judgment. Educational consultants usually bring in a lot more fresh ideas than it is possible for a one-community-oriented administrator to have. The time the consultant spends as a temporary member of the staff is not at the expense of neglect of regular duties. Stock plans inhibit everything, including economies; they stifle imagination.

Competence in Measurements. An administrator has a right to expect from his teachers some degree of competence in measurement, maintained J. Wayne Wrightstone, director of the New York City Board of Education's Bureau of Educational Research. Further, he said, teachers ought to be able to construct informal achievement tests in subjects in the curriculum.

Alas, confessed Mr. Wrightstone, "this ideal of competence rarely is found among all teachers, except the most unusual." He recommended inservice programs as a remedy. They should be geared to improve teacher competence "with regard to the interpretation of scores on standardized tests as well as [to the] gaining [of] competence in the construction of informal or teacher-made tests."

Protestants Urged To Fight Aid to Nonpublic Schools

New York. — The Protestant Council of the City of New York has asked its 1700 member churches to voice opposition to "the subsidy in any form by federal or state governments of nonpublic elementary and secondary schools."

In a "statement of principle" the council warned that "tax subsidy would attract the establishment of an endless variety of educational systems, duplicating and eventually destroying the public school system."

Thirty-one denominations comprise the membership of the council.



Edited by BESSIE COVERT

TO HELP YOU get more information quickly on the new products described in this section, we have provided the convenient Readers Service Form on page 235. Check the numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. The NATION'S SCHOOLS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Two Teacher's Desks Added to Irwin Line

A single pedestal and a double pedestal teacher's desk have been added to the



line of Irwin school furniture. Model 48 with a single pedestal provides 30 by 40 inches of work space on the wearproof, stainproof top, while the Model 60-1-3 double pedestal model is 30 by 60 inches. Both desks have glider slide full suspension drawers, and the welded uni-piled steel frame gives stability and long life. Irwin Seating Co., 1480 Buchanan Ave., Grand Rapids 2, Mich.

For more details circle #450 on mailing card.

Tubular Steel Folding Chairs Offered in Four Colors

Available in four colors, including beige, gray, terra cotta and turquoise, the #76 and #109 tubular steel folding chairs added to the Hampden line are built for heavy duty school use. Seats and backs of both chairs are designed for maximum comfort with perfect posture.
All parts are rustproofed and finished to prevent scuffing or chipping. The chairs fold easily and stack compactly and rubber tipped feet protect floors. Hampden Specialty Products Corp., Easthampton, Mass. For more details circle #451 on mailing card.

Portable Fume Hood Has Increased Overall Size



Increased interior height to provide additional room to perform many experiments is one of the improvements in the redesigned Flexihood, the Kewaunee portable lecture-demonstration fume hood. Sloping safety glass panels at the student side increase the observation area and the increased overall size provides additional room for experimentation. Constructed of stainless steel, the unit is also equipped with an understructure which rolls on swivel type casters. Kewaunee Technical Furniture Co., 3004 W. Front St., Statesville, N.C.

For more details circle #452 on mailing card.

Berlin Gymnasium Wall for Maximum Use of Floor Space

The Berlin Wall for dividing gymnasium space has forward fold operation. In the installation shown, it opens an 800seat folding spectator seating area, 20 rows high. By reversing the Omega Berlin Electric Drive, and closing the "Ez-A-Way" Folding Gym Seats, two gymnasi-ums are created. It is simple and easy to



operate and provides maximum use of all available floor space. Berlin Chapman Co., Berlin, Wis.

nore details circle #453 on mailing card.

Outdoor Luminaire Turns Itself On and Off

Any standard NEMA photoelectric cell can be used with the new Holophane Outdoor Luminaire which turns itself on at night and off in the daytime in any outdoor area where automatic operation is desired. The basic design uses an Endural glass bowl refractor with optical prisms on inside and outside surfaces while the fixture parts are made of alu-minum and stainless steel to resist corrosion. The new luminaire is suitable for mounting on poles or walls with standard brackets. Holophane Co., Inc., 342 Madison Ave., New York 17.

For more details circle #454 on mailing card.

Brunswick Trizoid Desk Designed for Multiple Use

One of several new designs in classroom furniture, the new Brunswick Trizoid Desk has a drop leaf which can be locked in place parallel to the basic work surface, drop below it, or be raised to a 90-degree angle. It provides a flexible and functional classroom unit to serve any use normally required from a desk, from

WHAT'S NEW for Schools

an enlarged surface to privacy for individ-ual work. The Trizoid fits into the modern layout of the "ideal classroom" which



combines products and scientific factors to better capitalize on teaching skills and to provide every learning advantage. The suggested layout illustrated shows how the Trizoid desk provides privacy for study in a room laid out for several group activities. Brunswick Corporation, School Equipment Div., 2605 E. Kilgore Rd., Kalamazoo, Mich.

details circle #455 on mailing card.

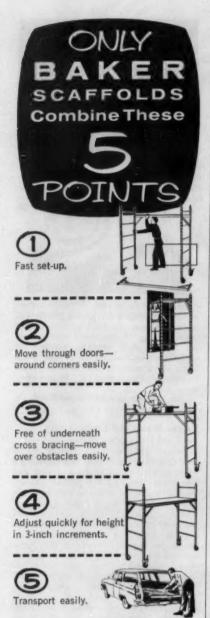
Univex Stands and Carts for Food Preparation Rooms

Several additions to the Univex line of food handling equipment will add flexibility in institutional kitchens. A new mobile stand designed for peelers permits peeling machines to be wheeled to the sink for use, saving counter space and eliminating lifting. Other Univex food machine stands, in addition to mobility, provide tops that can be adjusted in height for the convenience of the operator and the most efficient use of the particular machine it holds. The new Mixer Accessory Stand illustrated, Model E-240-A, is two feet in width and depth, die-formed of heavy gauge steel, galvanized or stainless, with telescopic legs which adjust from 24 to 36 inches high. It is avail-



able with or without casters and provides both a stand for any type or make of bench mixer, and a well-fitted, enclosed storage cabinet to organize all attachments for the mixing machine in one place. Universal Industries, Somerville, Mass.

more details circle #456 on mailing card. (Continued on page 208)



How fast you get on and off a job can depend on the scaffold your crews use. Baker Scaffolds move the job along faster . . . faster than any other method. You'll save labor time, make more profit with Baker Scaffolds. Free literature is available upon

request-or contact your local Baker Scaffold distributor. Listed Under Re-examina-tion Service Underwriters' Laboratories, Inc.

BAKER SCAFFOLDS

DESIGNED FOR PORTABILITY . BUILT FOR DURABILITY

BAKER-ROOS, INC.

P. O. Box 892, Dept. # 610 Indianapolis 6, Ind. DISTRIBUTORS IN PRINCIPAL CITIES Cafeteria Display Case For Frozen Desserts

Designed especially for use in cafeterias, the new Bally Cafeteria Ice Cream Merchandiser permits display of ice cream and other frozen desserts so that pupils



can pick it up themselves without having to be served. Even sundaes and plates of ice cream can be made up in advance and still retain their appetizing appearance for hours when displayed in the new case. Known as Model CAFI-36, it is completely clad in stainless steel inside and out and is designed to fit into both existing and new cafeteria line-ups. A storage compartment in the base holds reserve stock near the rugged but quietoperating Copeland condensing Model CAFM-36 is a matching com-panion case for the display of milk. Bally Case & Cooler, Dept. NR-7, Bally, Pa.

For more details circle #457 on

Four by Four-Foot Troffers in Recessed Lighting

Modern and trim in appearance, the new four by four-foot troffers added to the Smithcraft line of recessed fluorescent lighting equipment may be used individually or in conjunction with the Speedomatic Troffers to create a variety of architectural ceiling patterns. The troffers are available with polystyrene plastic dish or plastic louvers as shielding. The door frame hinges or opens from either of two sides for fast, simple maintenance. Installation is quick and easy and the troffers are available in three types to fit most ceiling systems. Smithcraft Corp., Chelsea 50, Mass.

or more details circle #458 on mailing card.

Gripdust Spray Treatment for Mops and Cloths



Penetrating instantly when sprayed on dust mops or cloths, Gripdust aerosol dust mop and dust cloth treatment permits quick, sanitizing cleaning of floors, desks, chairs and other furniture. Supplied in 16-ounce pushbutton cans, the spray cleaner has a refreshing scent, and a special detergent ingredient facilitates laundering of the mops and cloths. C. B. Dolge Co., Westport, Conn.

CHAIR BUYER'S GUIDE

HOW TO BUY



STEP ON IT! Step hard on back rest. If chair is a Samsonite, contour steel back won't give an inch. No back rest made is stronger or more comfortable!



"UNBALANCE" IT! Place object under leg of chair. Sit, and if it tilts or wobbles, it's not a Samsonite. All Samsonite folding chairs are self-leveling.



3 "TORTURE-TEST" IT! Lift front legs; "walk" chair forward, sideways. Only super-strong construction like Samsonite's can take this punishment.



SIT IN IT! Instantly you'll know the 4 difference. Observe that Samsonite folding chairs are contour-designed for maximum comfort. Good looking, too.



iv., Dept. NS 51, Detroit 29, Mich

No Question About It!

Airkem Protects The School from Environmental Health Hazards

Germs meet Airkem and die. Odors meet Airkem and vanish. Dirt and grime meet Airkem and dissolve. No question about it! The Airkem Program gets to the heart of the problem, and brings a new "climate" into the school—clean, odorless, agreeable, healthful.

Then what happens? Children's marks begin to perk up. Illness drops, attendance climbs. Teachers, parents, visitors notice a new air-freshened effect and a new feeling of comfort and well-being. Everybody benefits!

The Airkem Program is a scientific but extremely simple way to improve living conditions and health conditions everywhere in school — corridors, gym, auditorium, rest-rooms, locker rooms, classrooms, cafeteria, teachers' lounge, even the school bus! Easy to put into practice—just make sure the proper Airkem product is used in its proper place in school. Please inquire! Look in the "yellow pages" for your nearby Airkem man.

See opposite column for one specific Airkem benefit





AIRKEM For a Healthier Environment through Modern Chemistry Torrivent Heating and Ventilating Expanded to Include 17 Sizes

Designed for heating and ventilating large areas, such as school auditoriums, gymnasiums and the like, the expanded Torrivent line now has 17 basic sizes, with heating capacities from 20,000 to



3,800,000 Btu and air capacities from 600 to 54,000 cfm. The six new models permit the units to be adapted to installation sites on ceiling, floor or wall and the sectional construction affords further flexibility to permit tailoring the unit to present and future building needs. A new coil design makes the units more compact as one row of Trane heating coils produces the same capacity as that formerly achieved by two. The Trane Co., La Crosse, Wis.

For more details circle #460 on mailing card.

Anti-Slip Factor in Simoniz Floor Finish

Designed for extra safe floor care, Super Anti-Slip Floor Finish developed by Simoniz incorporates its "Ladium Formula." The anti-slip factor does not affect the full luster, hardness and durability of the finish which is suitable for all resilient and hard floors. Simoniz Co., 2100 Indiana Ave., Chicago 16.

For more details circle #461 on mailing card.

Prefabricated Piping System for Steam and Hot Water

Plasti-clad is the name given to a new, prefabricated piping system for the overhead distribution of steam, hot water and similar lines. It consists of the pipe and insulation covered with aluminum foil, over which are two wrappings of fiberglass cloth integrated within the Plasticlad material and finish. The entire system is prefabricated complete with expansion loops, anchor units, elbows and "T" units, ready for installation. Also pre-



fabricated is the new Plastic Coated system for underground distribution, consisting of pipe and insulation covered by a spiral welded metal conduit protected against soil and stray current corrosion by an epoxy coating which is reinforced with fiberglass cloth and is highly resistant to acids, alkalis and salts. Ric-wiL, Inc., Barberton, Ohio.

For more details circle #462 on mailing card.

(Continued on page 210)



Are you ready to welcome them?

PTA meeting tomorrow night? A civic group next week? School Board? Visiting lecturers?

There's always something scheduled. And that means there's always the chance of making new friends for the school, and cementing good relations with your community... IF!

IF there's a pleasurable, clean, odorless air environment in the room where they meet —gym, auditorium, classroom, or teachers' lounge. It's a BIG "if" when you've just had a basketball game, or a cooking-class, or a chemistry-lab period, or a crowded assembly.

Get rid of those odors fast-before people arrive! Put Airkem on the job! Airkem products and Airkem procedures will quickly counteract many odors that hang in the air — and leave an air-freshened effect that the public will appreciate and remember.

It's just one benefit you get from the Airkem program for environmental health — a sanitation maintenance program that includes cleaning, disinfection, odor-counteraction and the creation of an airfreshened effect in every part of the school ... every day. Put Airkem on your public relations staff. Let Airkem work full time, as a full-fledged partner!

	John Hulse, Airkem, Inc. Dept. NS 5 241 East 44th Street, New York 17, N.Y.
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Name	

BIG PERFORMANCE BIG SAVINGS



ATC-420R

4-speed transcription player/PA system provides all teaching features at big savings. 20 watt push pull Hi-Fi amplifier. Transformer powered for complete safety. 12" armored basket, heavy-duty speaker with coaxial tweeter cone. 25' cable. Inputs for mike, tape, radio or stereo kit. Plays all records, even 17 %" masters. Automatic turntable idler release. Ample space for storing the AC cord. Scuff resistant fabricoid covered %" plywood, case with metal corners and knee Spring cushioned plastic feet. Carrying weight only 22 lbs. ATC 420R \$99.50 school net, \$149.50 list. ATC 420VR with variable speed turntable illuminated strobe \$114.50 net, \$171.75 list.

uour dealer or write for complete specifications.

MORE TOWEL FOR YOUR MONEY

There are plenty of reasons Mc-Arthur Super-Gym Towels are the longest wearing in the field: Made of the finest long staple, tripletwisted, two-ply yarns; full tape rib construction; heavy tape selvage edges; full 20" x 40" shrunk size; light weight for economical laundering; yet extra strong for extra wear. They're good for 350 to 500 launderings! Write today for complete information.

GEO. McARTHUR & SONS, INC.

Baraboo, Wisconsin

(Distributors: TROY LAUNDRITE EQUIPMENT)

Now York State Representative VERN VOLLAND

19 Fairchild Drive, Buffalo 26, New York



Electric Unit Ventilators Reduce Maintenance Costs

The new Model NU series all electric unit ventilators eliminate the need for



boiler rooms, pipes and ductwork, and occasional changing of filters is the only routine custodial care required. In class-rooms, the units are installed along window walls, either individually or in conjunction with draft barrier storage cabinets, and a single control damper assures positive flow of outdoor air for ventilation and cooling. Filters are available in throwaway, renewable or permanent media forms. Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa. For more details circle #463 on mailing card.

1961 Rebound Tumblers are Chrome Finished

Available to schools and colleges at the same price as painted equipment, the 1961 Trampoline Brand tumbling equip-



ment is now chrome finished. The new units are rust resistant, feature new patented leg design and are attractive in appearance. Nissen Trampoline Co., 930 27th Ave, S. W., Cedar Rapids, Iowa.

"Little Store Dispenser" Supplies School Necessities

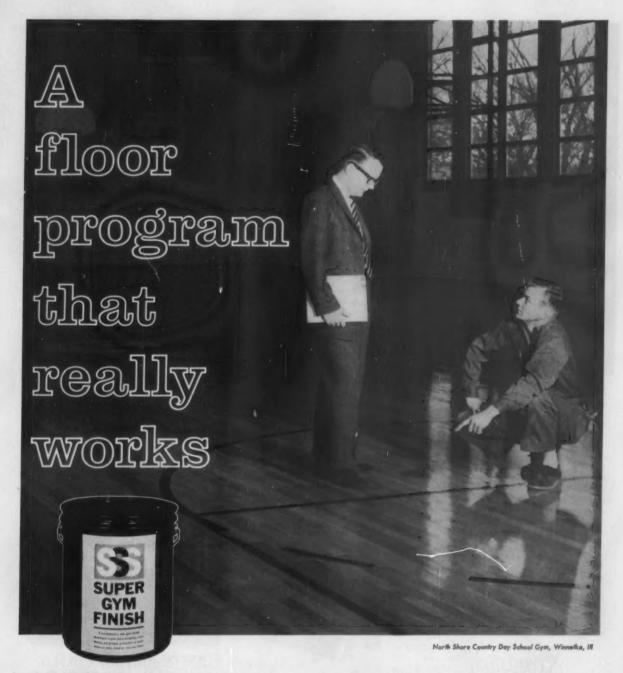
A coin-operated, self-service dispenser, trade named "Little Store Dispenser," provides students with the basic supplies of notebook paper, pencils and ball point



pens. A special convenience after bookstore hours, the machine eliminates costof-selling expense and saves time. The four file type dispenser drawers are easily restocked from the undershelf storage cabinet. School Supply Service Co., 12801

S. Halsted St., Chicago 28.

For more details circle #465 on mailing card. (Continued on page 212)



Nothing helps a maintenance budget more than major jobs that stand up better than expected. Your nearby Triple S member carries a complete stock of Triple S Seal Stripper, Super Floor Sealer, Super Gym Finish and Gym Floor Beautifier, all superior products for easy year-round maintenance. Ask your *Triple S* supplier to set up your gym floor program. Or write *Triple S*, P. O. Box 2288, San Francisco 26, California.



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EAST: Baer Paper Co., Inc., Baltimore, Md. · Baer Slade Corp., Washington, D. C. · Cleaning Materials & Chemical Co., Pittsburg, Pa. The George T. Johnson Co., Boston, Mass. · I. Janvey & Sons, Inc., Hempstead, Long Island, New York, and New York City · SOUTH: Buildings Equipment & Supply Corp., Richmond, Va. · Standard Chemical Congany, Miami and Ft. Lauderdale, Fla. · MIDWEST: Phillips Supply Co., Cincinnati, Ohio, Lawrenceburg, Ind. · ROCKY MT.: American Sanitary Products Co., Denver & Colorado Springs E-Z Janiter Supply Co., Phoenix & Tucson, Ariz. · PACIFIC COAST: Easterday Supply Co., San Francisco, Los Angeles, Portland, Ore.



As the automobile replaced the horse and buggy. so is the Stenograph shorthand machine replacing the pad and pencil.

The change-over began with court reporters who were quick to take advantage of Stenograph's amazing speed-it can take dictation faster than anyone can talk. They were impressed by the fact that anyone with some training can accurately transcribe Stenograph notes-they are inter-

Now, more and more business firms are requesting machine trained stenographers, particularly in the medical, legal, scientific and other specialized fields-to the point where the demand has far outstripped the supply.

Now schools teaching Stenograph are discovering that not only is it far easier to learn, but proficiency is developed much faster. Stenograph trained high school graduates are "taking" 140 to 180 words a minute.

These are some of the advantages of the Stenograph-the exciting, modern approach to shorthand.



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Please send more information about Stenograph shorthand and details on the Stenograph short course for teachers.

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school name			-
address	1		
city	zone	etato	

Lennox All-Season Ventilator For Classroom Conditioning

The Lennox DVW3-1200 All Season classroom ventilator is designed for installation in the center of an outside classroom wall. It combines the advantages of the Lennox Comfort Curtain system with the benefits of primary-secondary pump-



ing systems, allowing precise control of many zones without the use of expensive nany zones without the use of expensive valves. Advantages include heated or chilled water flow to the separate zones only on thermostat demand, optimum efficiency and reduced pump and pipe sizes, and reduction in operating and mainte-nance costs. Designed for use with chilled water as well as hot water, it may be applied to hot water systems only, with chilled water added at a later date with a minimum of change and expense. Through utility bookshelf sections or space-saving wall duct sections conditioned air is discharged upward along the entire perimeter of the outside wall forming a Comfort Curtain. Lennox Industries Inc., Marshalltown, Iowa.

For more details circle #466 on mailing card.

Zen Liquid Cleaner in Polyethylene Bottle

Zen liquid vitreous cleaner is now supplied in a hand-fitting, lightweight, un-breakable polyethylene bottle. Special fluting prevents slipping, even when hands are wet. A special poly "Pour-A-Cap" also provides greater economy in use of the one-step cleaner which cleans, sani-tizes and deodorizes in one application. J. I. Holcomb Mfg. Co., Inc., Indianapolis,

For more details circle #467 on mailing card.

Folding Tennis Table Features Uniframe Construction



Of regulation size and height, the new Smith rollaway folding tennis table features Uniframe construction for strength and stability. Structural members are integrated into a single welded unit so that the particle board top of the table need not hold the structure together. Made of 16 gauge, seamless steel tubing and Uframe members, the tennis table has threeinch rubber-tired wheels for ready mobility when not in use. Smith System Mfg. Co., 212 Ontario St. S.E., Minneapolis 14, Minn.

nore details circle #468 on mailing card. (Continued on page 214)

PROJECT

science demonstrations



The ACT-O-MATIC projector features exclusive "dual-position" operation. When used in the horizontal position, it operates as a standard overhead projector. Simple 1-second conversion to its vertical position enables you to project actual test tubes, electrolysis cells, meters and other science apparatus. As the demonstration is performed, it is projected LIVE on the screen in large, vivid detail. Tested demonstrations and prepared transparencies are available in chemistry, physics and biology.

TEST TUBES



Used in demonstrations of color reactions, crystallizations, titrations, precipita-

ECTROLYSIS CELLS



Vivid demonstrations of electrolysis and electroplating allow students to study every detail.



Its magnified action can be observed by even the farthest student.



Milli-ammeter/voltmeter can be projected on the screen while in operation.

ATTACHMENT



Notes, diagrams, etc. are projected as you write them. 100 ft. roll of reuseable film is supplied.



DUAL-POSITION PROJECTOR

LABORATORY **FURNITURE CO., INC.**

Old Country Road, Mineola, N.Y.

Replace Broken Windows for the last time!



Save Constantly Recurring Material Costs!

> Shatterproof PLASTIC GLAZING



NOW-COVER MULTIPLE WINDOWS WITH A SINGLE PLASTIC PANEL

Realise important savings and greater safety with Auburn's complete supply of plastic glazing panes. Amazing impact strength — protects windows against breakage from flying objects, vibration, etc. Fill school rooms, assembly rooms, libraries, gymnasiums with tree daylight from sidelights and skylights without constant breakage expense.

for TRANSPARANCY — Use PLEXIGLAS, the aircraft glaxing plastic. Impact strength 5 to 17 times greater than glass.

for ECONOMY — Use FILON fiberglass where visibility is not needed. No extra cost for color.

Complete stocks to meet all your plastics requirements, lucite, acetate, nylon, teffon, polystyrene — sheets, rods, tubes.



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in HALF the time at HALF the cost

Free your people for other important work; save manhours. The Clean-Cut 70 ROTARY GANG MOWER gives you extra power, extra speed, extra maneuver-

Ride at 5 MPH and cut a swath 70 inches wide! Change your cutting width while you mow! Trim, mow, unich . . . all in one money-saving operation.
Unexcelled maneuverability with unique rear-wheel

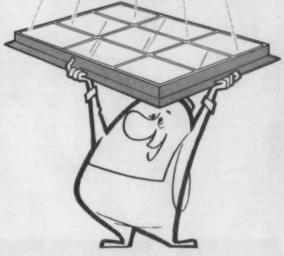
drive and steering. Mow slopes as steep as 30%!
There's a 35 and a 24 inch rider mower and a self-propelled 20 inch unit, too. See what Clean-Cuts can

do for your grounds.

Ask your Gravely dealer for a FREE demonstration, or write for complete FREE LITERATURE to:

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PRC TOPLITE CONTROLS THE SUNLIGHT



This revolutionary roof panel controls the sun's glare and minimizes apparent shadow. Low winter sunlight and north light is accepted. High summer sunlight is rejected.

PRC Toplite offers new-found light control in nearly all types of building structure such as schools, churches, factory buildings and art galleries.

PRC Rubber Calk is applied during manufacture to ensure a positive weather tight seal and provide maintenance free performance.

PRC Rubber Calk and PRC Toplite are but two of the many products PRC manufactures for the construction industry.

Please fill in the coupon below for colorful, descriptive catalog. Complete sales and manufacturing facilities on both East and West Coasts.

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CITY



PRODUCTS RESEARCH COMPANY 2919 Empire Avenue, Burbank, California

Mobile Language Lab Housed in Trailer

Developed as an economical solution to the teaching of foreign languages in rural areas and in elementary school programs where one language laboratory on wheels may serve a number of classes, the Rheem Califone mobile classroom will accommodate from an eight to a 27-station language laboratory. It is housed in a ruggedly constructed trailer, fully air conditioned and weatherproof, and is avail-



able in 35, 42 and 55-foot lengths, eight and 10 feet wide. Rheem Califone Corp., 1020 N. La Brea Ave., Hollywood 38,

For more details circle #469 on mailing card.

All-Purpose Sunroc Fountain Is Wall-Mounted in Small Space

The Sunroc Model SR-WF all-purpose fountain combines the convenience of a water cooler with the beauty and endurance of stainless steel at an economical price. It supplies uncooled water, or drinking water cooled by its self-contained cooling unit, and can be easily refriger-

ated any time after installation without disturbing existing plumbing. The wallmounted unit takes up small space and



does not interfere with floor cleaning. It is semi-recessed and the modern design makes it easy to clean. Sunroc, Div. SR, Glen Riddle, Pa.

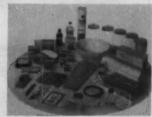
re details circle #470 on mailing card.

Filmed Program Offered for Biology Instruction

The introduction of a filmed program representing a new approach to biology instruction is announced by Encyclopaedia Britannica Films. The new Biology Program consists of 66 films and 50 filmstrips presenting fundamental information in a form that facilitates its integration with existing teaching patterns. Units of the films series can be summoned individually to fit precise classroom requirements and range in length from 10 to 24 minutes. They can be shown whenever the teacher feels a particular film is appropriate to the schedule. Preparation of

this visual program material resulted from intensive research and personal interviews with high school and college science teachers and curriculum specialists to dis-cover the requirements for audio-visual aids. Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill. For more details circle #471 on mailing card.

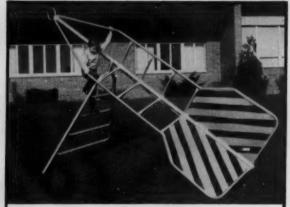
Dispensary Equipment Kit for Fleetwood Clinic Cart



A carefully selected grouping of emerency first aid needs is included in the Dispensary Equipment Kit assembled by Fleetwood for its new Clinic Cart developed for physical education, athletic and health departments, and other areas of the school. All types of minor accidents can be properly cared for from this very complete kit and serious cases can be handled safely until a doctor arrives. A modern airway Resuscitube for scientific mouth-to-mouth artificial breathing is included for swimming pool accidents. Fleetwood Furniture Co., Zeeland, Mich. For more details circle #472 on mailing card.

(Continued on page 216)





GAME-TIME'S NEW ROCKET CLIMBER

An exciting climber that lets small tots share in "space age" adventure. All-welded steel construction, and the all-welded "launching support" bolts easily to the all-welded "launching support" bolts easily to the rocket itself. Frames are galvanized and finished in weatherproof aluminum finish, while the colorful tail fins are in red and white Grab-tite coating. The overall length is approximately 12' 6" and the height of the nose ring is 7' 6". For permanent installation. Here's the perfect climber for junior "astronauts"! Price \$179.00.



Write for free literature on Game-time's complete line of playground, park, and sports equipment

GAME-TIME, INC.

609 Jonesville Rd.

Litchfield, Michigan

Has your copy arrived? If not, write

everything in school supplies

900 N Narragansett Ave. Chicago 39, Illino



USE **SIMONIZ** HEAVY-DUTY FLOOR WAX



Increasing thousands who demand professional quality, sensibly priced, are switching to this outstanding performer. Exclusive "Simoniz-Wax" formula—stands up under the most abusive floor conditions... and comes back for more. It has everything you want in an automatic luster, self-polishing, buffable, slipresistant wax-finish for all floors. Try it. Our guarantee respects and protects your judgment.

Call your Simoniz Commercial Products Distributor today or use the convenient coupon. Simoniz HEAVY-DUTY comes in 1-, 5-, 30-and 55-gallon sizes.

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NEW **MYCO** FIRST COAT

Won't Yellow! Stops Floor Porosity! Saves Dressing Time! Saves Moneu!

FIRST COAT



is a colorless. semi-permanent primer that fills the pores of composition floors, makes dressings adhere better, stay

glossier, wear far longer. It never yellows, laps or streaks; applies easily with mop. No leveling problems. Stripping dressing won't disturb First Coat, and unlike sealers, it can be removed! An excellent costcutting way to restore old floors, eliminate efficiency-robbing chemical action between new floors and dressing.

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High Quality Reproduction With Sonotone Ceramic Microphone

A new ceramic microphone, Model "CM-17," for permanent audio installations requiring a unit capable of con-tinuous high quality reproduction despite hard use, is introduced by Sonotone. Called the "Flex-Mike" because of its flexible mounting, the ceramic microphone



can resist extreme temperature or humidity conditions, absorb rough handling such as that given in language laboratories, PA systems and communication stations, and still provide quality sound. The sturdy, one-piece, die-cast metal case is mounted on a 13-inch fully flexible stand which terminates in a removable mounting plate. Sonotone Corp., Elmsford, N.Y.

ils circle #473

Closed Circuit TV System Has "Electronic Blackboard"

The Scan-A-Graph is a special school closed circuit television system featuring a unique teaching device called the "electronic blackboard." This instruction aid permits the instructor to remain at his desk and to transmit to an unlimited number of video monitors or receivers anything he wishes to write, copy or draw. The Scan-A-Graph is adaptable for this purpose by directly feeding the film into the transmitter and students in as many as 500 classrooms can view it simultaneously. There are no lights and no cameras used, operating procedures are simple, and no special training is required. Television Utilities Corp., Div. of Nord, New Hyde Park, L.I., N.Y. ore details circle #474 on mailing card.

V-M Projector Synchronizer For Slide-Script Presentations



Model 1412 V-M Synchronizer, developed for use with tape recorders and slide projectors to present coordinated material, is completely compatible with most popular brands of remote control slide or strip film projectors. Teachers can add their own words and music to films and slides and the easily-operated electronic device synchronizes automatically. The Voice of Music, 226 Pipestone St., Benton Harbor, Mich.
For more details circle #475 on mailing card.
(Continued on page 218)



Very likely-if they're washed by hand. Start with a dishwasher's wages . . . add breakage, extra hot water used, extra soap ... and the money paid out in a year is several times the price of a Kewanee Dishwasher that-

- Washes, rinses and air dries over 2000 dishes, glassware and utensils
- Sanitizes dishes in 180° rinse water that kills pathogenic bacteria.
- · Heats its own water . . . saves deter-



Kewanee DISHWASHER 802 Burlington Ave. Kewanee, III.

GIVE THEM A HAND

with Keyes Molded Paper Service to lighten their tray! End breakage!







CHINET MOLDED

Strong, leakproof and greaseproof thanks to Keyes molded construction and new Plastisizing Process. KEYES FIBRE COMPANY, Dept. NS-5 Waterville, Maine

Please send me complete information on Keyes Molded Paper Service.

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Portable Indoor Choral Shell Improves Performance



Portable The Wenger Choral Shell enables choruses, ensembles and soloists to perform at top level under varied indoor conditions, as the group can hear itself, thus eliminating problems of pitch and blending caused by poor acous-tics. Fully collapsible, the height of the shell is adjustable for use with or without chorus risers. Custom-built units are available for special staging arranging or for use by large groups. Wenger Music Equipment Co., Owatonna, Minn.

more details circle #476 on mailing card.

Malt Flavored Syrup Instant and Economical

The new Pet Instant Malt Flavored Syrup costs less than malted milk powder, will not cake or harden and is not affected by humidity. The syrup does not need refrigerating and is supplied in gallon jugs and quart decanter bottles, each with a preset dispenser pump. Pet Milk Co., Arcade Bldg., St. Louis 1, Mo.
For more details circle #477 on mailing card.

Folding-Door Hardware Has Bi-Fold Action

Non-binding opening and closing action and bi-fold action for access way are features of the new Stanley multiple foldingdoor hardware set No. 2995. The track is extruded aluminum with a decorative anodized finish and the heavy gauge steel hanger has two load bearing nylon rollers and two guide rollers. A special flat spring



provides a self-leveling feature which automatically adjusts for variations in load bearing during operation, and ensures smooth, quiet operation of room dividers or folding closet or storage doors. Stanley Hardware, The Stanley Works, New Britain, Conn.

ere details circle #478 on mailing card.

Redesigned Refrigerator Line Has Significant Improvements

Four inches of insulation in cabinets, which maintains a more level temperature for longer periods, is a feature of the completely redesigned Raetone line of refrigerators for institutional use. This fea-

ture, together with the greater cooling capacity, reduces running time to effect lower electric consumption and increased condensor life. The complete line includes reach-in refrigerators, freezers, under-counter refrigerators, beverage coolers and water stations. Redesigned in full compliance with the forthcoming National Sanitation Foundation Code, all models have tubular-type six-inch adjustable legs to permit cleaning underneath.

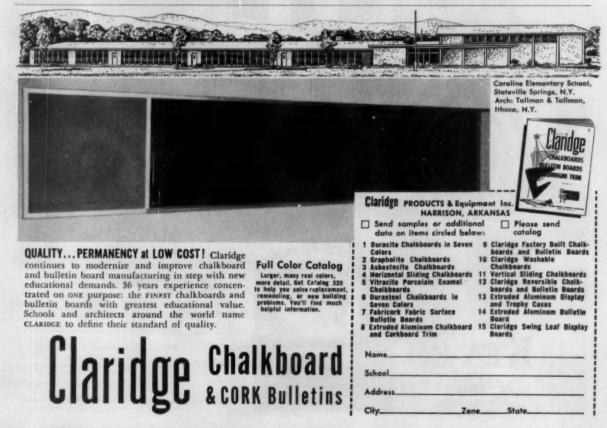
All self-contained units feature a new electric condensator vaporizer that elim-inates drippings and the need for floor drains. All models have completely automatic defrosting; large, rounded interior corners for easy cleaning; heavy duty shelf and pan slide supports; extra strong inner door liner of "cycolac," a high im-

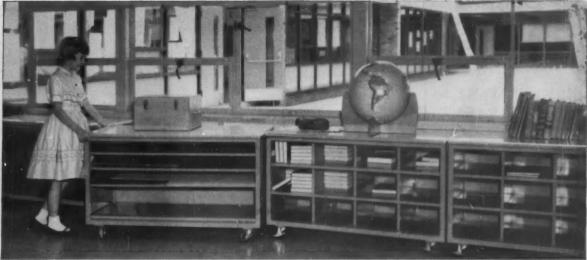


pact material that is non-conductive and resistant to breakage; self-closing hinges, and magnetic door catches to ensure closeven when the user has both hands Raetone Commercial Refrigerator Corp., Plymouth Meeting, Pa.

e details circle #479 on mailing card.

(Continued on page 220)





No "SPACE PROBLEM" Here.



"Attractive use of color durability and superior steel construction made Grade-Aid Classroom Equipment our first choice."

Mr. Virgil G. Sheeley, Principal Guilderland Elementary School



The Guilderland Elementary School, Guilderland, New York — each classroom is equipped with several Grade-Aid mobile classroom units for time-saving convenience, extreme space flexibility. Original architects were Perkins and Will; architects for the 1959 addition were Urbahn, Brayton and Burrocs.

ONLY GRADE-AID OFFERS ALL THESE FEATURES!

- Heavy 20-gauge furniture steel, with corrosionresistant hi-bake DuPont Dulux enamel finish.
- Seamless one-piece stainless steel tops or melamine plastic sink counter tops.
- Full wrap-around base, concealing casters. (Not used in photos above)
- Standard 21" depth to save floor space and for convenient arm-length storage.
- Continuous wall-to-wall counter tops, if desired.
- Birchwood pattern melamine plastic doors and tops to blend with natural wood decor.
- Sliding doors available in steel, hardboard or plastic surface in a variety of Grade-Aid colors and patterns.



CLASSROOM EQUIPMENT
In the Guilderland Elementary School, all available space is utilized, with the help of modular, mobile

Grade-Aid Classroom Equipment. Versatile Grade-Aid units are designed for maximum utilization of classroom space, simple rearrangement to meet changing space requirements and storage needs. All counter storage models are available in six heights to fit all grades.

All Grade-Aid equipment is constructed of heavy 20-gauge furniture steel for fire safety, durability and economy. It's easy to keep clean and maintain — no warping, swelling or rotting can mar the lasting beauty of steel.

If there's a storage problem in your school, investigate the finest — Grade-Aid Steel Classroom Equipment, including a complete line of sink units, wall and counter storage cabinets and wardrobes.

GHADE-AID CORPORATION 46 Bridge Street, Nashua, N.H.	Please attach to your business letterhead.
☐ Please send me your full color catalog on the new Grade-Aid all-steel school equipment.	e complete line of
☐ Please send me the name of your nearest repr	
Name	
Title	





Portable All-Purpose Bench Model M1222 \$485.00

BIGGER . . . Does double the work of an other machine its size! VERSATILE . . . 9 variable speeds, interchangeable without stopping ! SET IT . . . FORGET IT . . . Automatic timer stop: automatically! COMPLETE . . . Mixer unit, 22 qt. cap. bowl, with beater and whip.



Fleer Model MPF1222 \$475.00

Same features as Model MP1222 Available with casters, too.



Floor Medel MF1222 \$530.00

Same features as Model M1222 Available with casters, too.



Portuble Pizza Model MP1222 \$430.00

MAMMOTH ... 35 lb. cop. UNIQUE...First and only pizza mixer, especially designed to mix heavy pizza and broad dough. SINGLE SPEED
OPERATION . . . With
overload protection. COMPLETE . . . Mixer unit, bowl and dough hook.

FOOD MACHINE STANDS







In various sizes and heights Gal. and Stainless . . mobilizes mixers, scales, meat choppers, slicing machin

Prices slightly higher in the West and Canada

SEE NEW PRODUCTS. N.R.A. SHOW BOOTHS #868-870

UNIVERSAL INDUSTRIES

DEPT. S 87 FELLSWAY, SOMERVILLE, MASS. CANADIAN DISTRIBUTOR: CROWN ELECTRICAL MFG., LTD., SRANTFORD, ONTARIO

Metalab Labconsole Tables Have Unobstructed Knee Space

The new Metalab Modular Labconsole center and wall tables are securely anchored to the floor with all service piping and wiring concealed in the structural is-



land, and easily accessible for maintenance. Completely unobstructed knee space contributes to good posture and comfort, and the table is available in a wide range of sizes. Metalab Equipment Co., Hicksville, N.Y. For more details circle #480 on mailing card.

Beckley-Cardy Science Kits Include Manuals and Experiments

Dramatic demonstrations can be made by pupils after brief study of each subject in the Beckley-Cardy Science Kits. Stepby-step instructions for experiments are



written and illustrated in the manuals which are included. Now Available are kits on Air and Air Pressure, Sound, Sim-ple Machines and Magnetism. Beckley-Cardy, 1900 N. Narragansett Ave., Chicago 39.

For more details circle #481 on mailing card.

Four Typewriters Introduced by Underwood

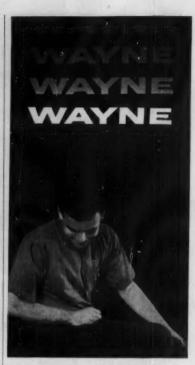
Three electric and one manual type-writer are included in the complete new line recently introduced by Underwood. The line is designed to provide machines for every use, with each machine developed to meet a specific need. Included are the Raphael, an electric typewriter with variable spacing which produces transcript with the sharpness of printing; the



Forum, featuring standard typewriter spacing with electric operation; the Scriptor, designed for general purpose typing, and the Touch-Master Five, a standard typewriter with light touch for general purpose typing. Underwood Corp., 1 Park Ave., New York 16.

re details circle #482 on mailing card.

(Continued on page 222)



WAYNE OUTDOOR SEATING SYSTEMS

work wonders with any seating budget



Wayne Type "L" Portable Steel Bleachers, More safety, seating, savings on cramped budgets.



Sturdy Wayne Type "H" Portable Steel Grandgrow as your program expands



Wayne Permanent type grandstand seating systems save dollars in the largest stadium.



Whatever the scope of your sealing needs, whatever the size of your budget, Wayne can provide a system that gives more efficient sealing. . . at greater savings. For when you call Wayne you draw on the experience of the world's largest manufacturer of spectator sealing.

Write for all-new 1961 out-door seating catalog inday.

WAYNE IRON WORKS . WAYNE, PA.



WORK WONDERS WITH DELUXE LIBRARY SHELVING

Only DeLuxe shelving by Royal gives you such quality, such durability, such flexibility! So durable, it will last a lifetime; so flexible, you can install it quickly and rearrange it

So durable, it will last a lifetime; so flexible, you can install it quickly and rearrange it without tools. For extra strength and rigidity, every shelf is a tie shelf. All shelves are fully adjustable. Add new units any time, without disturbing existing shelves. DeLuxe shelving welcomes the eye with soft pastel colors in durable Plastelle enamel, assuring easy cleaning and years of carefree beauty. Exclusive Chem-A-Cote® bonded baked enamel finish. Write today for full information. DeLuxe Metal Products Division, Royal Metal Manufacturing Company, Dept. 42-E. One Park Avenue, New York 16, N. Y.





PRODUCTS DESIGNED FOR

SCHOOLS

WITH MULTI-PURPOSE ROOMS!



DU-HONEY 312 TABLE-BENCH COMBINATION

Easy to store! Easy to fold and unfold! Easy to clean! Built for years of rugged service. Seats 16 comfortably.

DU-HONEY 112 PORTABLE-FOLDING TABLE-UNIT



Has the Exclusive "Piggy Back" Storage Feature. A Table that can change your multi-purpose room into a cafeteris, class-room or lecture hall in seconds. With the "Piggy-Back", your 12 standard folding chairs store right with the table.



DU-HONEY 512 FOLD-AWAY ROLL-AWAY **TENNIS TABLE**

Features the "Hide-Away" Net. A quality champion built for championship play. Store it in a closet! Glide it into place! Open with "feather touch" . . and you're ready to play. Regulation net stores inside table in tucked position and extends to official width when opened.

PEDESTAL LEG FOLDING TABLE



Plenty of leg room with the "Off-Center" leg principle, which adds seating to ends. Lightweight, sturdy, folds compactly for easy stacking.



CADDIES FOR CHAIRS-TABLES

The fast, easy, safe way to handle foiding chairs and tables. Durable construction engineered for years of effi-cient service.

CHORAL RISERS



Easy folding! Compact storage! Designed for beauty and strength!



PORTABLE HILL PLATFORMS & BANDSTANDS

Sturdy, durable! Compact folding! Ideal for music and band rooms.

FREE CATALOG

Midwest

LA-9-2741

FOLDING PRODUCTS Corp NS-305 HOSELLE ILL

Tucker Window Washers Add Two High Models

Two new models are available in the Tucker line of window washers for upper floors. While the operator remains safely on the ground, the new models will reach to heights of 76 feet and wash windows efficiently. Operated by one man, the



washers have telescoping handles with brush and detergent dispenser which regulates the flow of detergent or rinse water. Special wide flaring brushes clean large, small or rough windows and trim. The handles can be reduced or separated into sections for washing lower level windows. Tucker Mfg. Co., Cedar Rapids, Iowa.

For more details circle #483 on mailing card.

High Speed Automatic Collator Available on Lease Plan

The new high speed All-Electric, Fully Automatic Halverson Collator is available on a money-saving three-year lease basis. The unit collates at a speed of eight sheets per second and delivers complete crisscrossed sets, jogged and counted in the delivery tray. Halverson Products Co., 1051 N. Paulina St., Chicago 22.
For more details circle #484 on mailing card.

Autoscore Teaching Machine Complements Personal Teaching

Developed to supplement the teaching of material which depends upon memory and practice after the ground work is laid by the teacher, the Autoscore is a small, lightweight and relatively inexpensive machine that serves as a private tutor to the pupil. Question and answer cards



in spelling, arithmetic and word meaning permit pupils to drill without taking the time of the teacher who is released for more creative work in the classroom. The machine is operated by touching contacts with a pencil shaped stylus and can also be used for memory and practice in geography, history, chemistry, reading comprehension, grammar and the like. Astra Corp., 31 Church St., New London, Conn.

nore details circle #485 on mailing (Continued on page 224)

Eliminate Costly Film Damage





NEW EDITION -"Treasure Chest of Audio-Visual Ideas". Free booklet gives latest information on effective use of films. For your copy, circle #621 on mailing card included in this issue.

Victor Animatograph Corp., Div. of Kalart PLAINVILLE, CONNECTICUT



center of importance W DETROIT

• 800 fine rooms with bath, radio, TV

 Grenadier Dining Room DETROIT and Lounge

· Coffee Shop Convention **Facilities**

• Ample Parking



HOTEL CASS AVE. AT BAGLEY

DOWNTOWN DETROIT 26. MICHIGAN



SCOREBOARDS ARE AN INVESTMENT

that pay schools for many years to come. They not only provide players and spectators with up-to-the-second information, but give long-lasting, trouble-free, low maintenance service.



Model 1250-2 Football Scoreboard and Timer, today's most widely used board. Overall size, 8'4" x 18'4", with 18" x 12" Numbergrams, 12" x 18" Symbols, 12" Lettering.

Write today for literature and prices on Scoremaster Scoreboards for all sports. You'll be glad you did.

THE M. D. BROWN COMPANY

2233 Lake St. MUtual 3-3100 Niles, Mich.
"When Split-Seconds Count, Count On Scoremaster"

Raised Letter ALUMILITED ALUMINUM SIGNS AND DOOR NUMBERS



Our Low Prices Will Surprise You! Ask For Our Style No. 870 "Enduro" SIGNS

SPENCER INDUSTRIES

1508 N. MASCHER ST.

PHILADELPHIA 22, PA.

THINGS ARE CHEAPER THAN PEOPLE

All through the advertising pages of this magazine and in the "What's New" section there is information on products that will save you and your staff time and do the job better. Every wise administrator knows that time saved is money saved—that things are cheaper than people. Be sure you know all that research and manufacturing skill are making available to save you and your staff time and money—and do the job better.

Turn to the yellow sheet at the back of this issue—you'll find every product shown in the magazine identified by number. The postage-paid return card will bring you the specific information you need. Be sure to keep up to date. Use the card and be sure.

"Closet Trak" System For Maximum Storage



The "Closet Trak," a new system for holding garment hangers, centers around an extruded aluminum track which is attached to the bottom of any shelf, either lengthwise or across, and holds all types of garment hangers. The complete system is inexpensive and quickly installed with-out disfiguring shelves or walls and permits efficient use of available space of any shape or size. Choir robes, band uniforms and the like are condensed into minimum storage space with the system. Vogel-Peterson Co., Inc., P.O. Box 90, Elmhurst,

For more details circle #486 on mailing card.

Special Project Science Room **Available on Custom Basis**

Science laboratory facilities for special projects areas are available on a custom basis from St. Charles School Storage Division. The area illustrated is designed to be used by as many as 12 students who have special research ideas or projects set up for long-term experiments where they may work in free time without interruption. Each student has a storage compartment and drawer with lock. Gas and electric outlets are wall mounted to provide maximum work table space and the pegboard wall paneling permits shelving to be placed according to need. Storage units are made of heavy gauge steel spe-



cially finished, and sinks and work tops are of Alberene Stone. St. Charles Mfg. Co., St. Charles, Ill.

For more details circle #487 on mailing card.

Marvelead Pencils Have High Break Resistance

A pencil lead with greatly increased strength is now used in the Ticonderoga line of pencils. The new formula is the result of two years of research and the lead retains the smoothness and free glide of soft leads, writes blacker and wears longer. Marvelead is offered in five degrees of hardness. Joseph Dixon Crucible Co., 167 Wayne St., Jersey City, N.J. For more details circle #488 on mailing card.

Cafeteria Display Unit Has Plate Glass Guards



Curved plate glass protector guards and curved aluminum support brackets and speed service with the Bastian-Blessing Custom-Modular line of cafeteria equipment. The post obstruction on the serving side is eliminated and the glass unit is more sanitary. Bastian-Blessing Co., 4203 W. Peterson, Chicago 46.

Plastic Dish Racks Added to Raburn Line

The Raburn line of all-plastic racks for handling cups, plates and other dishes during automatic dishwashing operations and for service is being constantly augmented. New recently are a small sized rack for washing cups, Model 5000 plate rack which is light in weight yet has maximum capacity, and a utility rack weighing 21/2 pounds, yet requiring no carriers or inserts. The rugged nesting racks save space, are built for long use, and require no maintenance. Raburn Products, Inc., 350 N. Clark St., Chicago 10.

ore details circle #490 on mailing card. (Continued on page 226)



ADAPTABILITY UNLIMITED!



a piano of professional performance that fills every educational need . . .

CLASSROOM ASSEMBLY HALL STUDIO ON STAGE IN THE HOME

Practical in size . . . Big in volume . . . Superior in tone and action . . . Distinctive in styling

There is never any question when your plano is a

Mason & Hamlin



Full Specifications on Request, East Rochester, N. Y.

MILDRED BALLARD, BLOOMFIELD, OHIO HIGH SCHOOL TYPING INSTRUCTOR,

GIEST BOYAL MCBE

prefers Royal Electric Typewriters; says students find "change-over" easy.

"I prefer Royal typewriters in general," says Mildred M. Ballard, "because of their ease of operation, their simplicity and their time-saving conveniences.

"I prefer Royal Electrics in particular because my students experience little difficulty in changing from the manual to the electric."

Miss Ballard speaks from 18 years of experience in the classroom. You, too, will find the beautiful new Royal Electric a fine teaching aid...a natural complement to your Royal Manual typewriters...easy to learn, easy to teach. Royal service is dependable, too.

Your Royal Representative will be happy to demonstrate the modern new Royal Electric right in your own classroom or office. Why don't you discuss your needs for the coming school year with him soon.

PRODUCT OF ROYAL MOBEE CORPORATION, WORLD'S LARGEST MANUFACTURER OF TYPEWRITERS.

Portable Electric Change Unit Is Counter and Sorter

Model CS-100A is an electrically-operated change counter-sorter which features low price with portability. It is designed for minimum maintenance, with only two moving parts other than the motor, both



made of durable metals. When the unit, which is easily carried in its sturdy case with a handle, is set up on a counter and plugged in, the switch is turned, coins poured in and it automatically counts and sorts 15,000 coins per hour, handling pennies, nickels, dimes and quarters, with half-dollars remaining in the hopper. Standard Change-Makers, Inc., 422 E. New York St., Indianapolis 2, Ind.
For more details circle #491 on mailing card.

Gratelite Louver Diffuser in Two by Four-Foot Size

The new two by four-foot module Gratelite Louver Diffuser includes the Guth % inch cubes producing thousands of small open plastic cubicles with opti-mum 45 by 45-degree shielding. The resulting light diffusion gives velvetized illumination in fixtures or overall ceilings.

The small cube size assures maximum concealing of lamps and ceiling components. Injection molded of polystyrene plastic, the module Gratelites radiate a cheerful white light. They offer complete flexibility and ease of installation and the tapered vanes give extra strength and rigidity. Edwin F. Guth Co., P.O. Box 7079, St. Louis 77, Mo.

details circle #492 on mailing card.

Compact Floor Machine Has Încreased Use

Supplementing its previous versatility, the Super Service Port-Able 13SP floor machine is now equipped with a solution tank for scrubbing and shampooing car-pets and rugs. The tank of high impact



Styrene provides light weight with strength and durability. Built especially for small area duty, the machine has a cast aluminum brush skirt and standard aluminum drive plate for the 13-inch brush. The National Super Service Co., 1945 N. 12th St., Toledo 2, Ohio.

Folding Arm Chair

Has Upholstered Seat and Back

The new Howe 100 folding arm chair features full length arms and an independent seat fold so that the chair remains standing even when the seat is up,

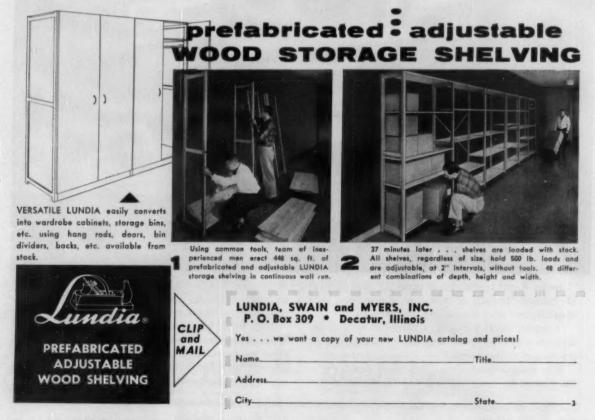


thus providing easy access when chairs are set up in auditorium style. Arms, back and seat are cushioned with foam rubber, and the heavy gauge steel tubing frames are finished in beige baked enamel. Howe Folding Furniture, Inc., 1 Park Ave., New

For more details circle #494 on mailing card.

Test Interpretation Exercises Facilitate Use of Tests

A set of Test Interpretation Exercises is now available for use in measurement courses, teacher in-service training programs and guidance institutes. They are designed to meet the need among test users for interpretative aids and materials to assist in getting the most out of testing procedures. California Test Bureau, Del Monte Research Park, Monterey, Calif. For more details circle #495 on mailing card.



PREVIEW FASTER EASIER



Viewlex Previewer Sr.

Fastest, most convenient method yet—for desktop previewing of 35mm filmstrips. Large 7" x 9" screen also provides ideal direct viewing for individuals or small groups and for home study or use as filmstrip "textbook." Threads itself instantly. Focuses with single knob.

\$59.50



Previewer Jr.

For On-The-Spot hand-held or desk-top previewing of filmstrip. Operates on A.C. current or batteries. Simple to thread; sprocket advance. Extra-brilliant optical screen.

Model I—For operation s 15.95
Medel II—For operation on A.C. Current and batteries........\$17.95



IN CANADA - ANGLO PHOTO LTD., MONTREAL

Cafeteria Counters in Enameled or Stainless Steel

Available in 18 gauge steel, enameled or stainless as desired, the new series "27" cafeteria counters replace two earlier models. The 26½-inch wide tops are flanged down flush against the body on



all four sides. A deluxe model is also available with a 29¼-inch top. Duke Mfg. Co., 2305 N. Broadway, St. Louis 6, Mo. For more details circle #496 on mailing card.

Amtico Vinyl Flooring in Colors Unlimited

A special service for vinyl flooring is offered by Amtico in Colors Unlimited. Floors may be matched to decorating plans by sending a swatch of the desired hue to the manufacturer for matching exactly in plain or terrazzo. Also new in the line are Flagstone rock-ridged vinyl, colored Travertine, and five species of forest Wood. The latter is actually grooved to the precise depth of dressed lumber with the gloss of hand-rubbed patinas. Amtico Vinyl & Rubber Flooring Div., American Biltrite Rubber Co., Trenton, N.J.

For more details circle #497 on mailing card.

Increased Bus Driver Vision
With Superior Tru-Vue Windshield

A four-piece, flat windshield that gives 136 degrees of driver vision is an added safety feature on the 1961 Superior school buses. The two center portions of the windshield and the left and right hand sections give a total 2074 square inches of polished safety plate glass. The Tru-Vue is easier to service and costs less to insure, maintain and to replace sections when necessary. The deluxe, curved Scene-O-ramic wrap-around windshield



will continue to be available on Superior buses. Another new safety feature is the Jack-Knife Safety Door which folds rearward, leaving an unobstructed view to the side by the driver when the door is open. The floor-mounted door control locks open and closed to eliminate accidental door opening. Interiors of the 1961 line are completely restyled with new "Comfort Line" seats, with contoured seat back and cushion for better posture control available as optional equipment. Superior Coach Corp., Lima, Ohio.

(Continued on page 228)

FILMSTRIP AND SLIDE

PROJECT BRIGHTER SIMPLER

No Filmstrip



Doubles Effective Light!



Student interest perks again and again—frame after frame—as you teach easier, faster with the brighter, sharper virtually "Automated" Viewlex V-25-P. It's the simplest to use, most advanced combination 35mm filmstrip and 2"x2" slide projector made. And—revolutionary new "Anti-Hesive" aperture plates eliminate filmstrip sticking forever!

Write for FREE Booklet of Award Winning Essays on "How Audio Visual Aids Make Teaching and Learning Easier" and Viewlex Catalog.



IN CANADA - ANGLOPHOTO LTD., MONTREAL



Automatic Tension Bar Assists in Table Operation

A new unit which facilitates opening and closing Schieber Compac-Fold tables, the Tension Bar goes into operation as soon as the table is released from the pocket, providing a smooth descent to the floor. In returning the table to its pocket, the tension bar acts efficiently as a lifting aid in the initial folding operation, and continues to exert folding pressure until the unit is fully closed. Schieber Mfg. Co., 12955 Inkster Road, Detroit 39, Mich.

Fold-Away Step Unit Is Attached to Book Truck

The Step-Book Truck is an easy-rolling, three-shelf mobile book truck which has a fold-up two-step-stand attached to one end. The free-wheeling truck unit can be turned against shelves or wall and with the two steps unfolded, the librarian or assistant can reach upper shelves with ease. The steps come down or are folded away by toe action, without the need for stooping, making it a simple operation

to return books to high shelves in various locations. The truck has a capacity of approximately 90 books, but the fold-away step unit can be supplied with any of the



company's models, or separately for attachment to any book truck. Bro-Dart Industries, 56 Earl St., Newark 8, N.J. For more details circle #500 on mailing card.

Gymnasium Floor Seals Provide Durability

Primathane, a heavy duty primer coat and penetrating seal, and Urethol, a heavy-duty floor seal and finish, are two new floor products recommended for use on gymnasium floors, and on all wood and concrete floors in schools and colleges. The seals are based on urethane polymeric components and have unusual hardness. They are non-toxic, non-irritating and abrasion resistant. The Puritan Chemcal Co., 916 Ashby St., N. W., Atlanta 18,

For more details circle #501 on mailing card.



Metal Waste Baskets in Three Key Colors

Available in green, gray and brown, the new United Metal Model #201 round waste baskets are made of rust resistant 26 gauge steel. The 26-quart model is 141/2 inches high, 131/2 inches across the top and 10 inches across the bottom. United Metal Receptacle Corp., 27-29 Ocean Ave., Jersey City 5, N. J. For more details circle #502 on mailing

Instructomatic System for Language Teaching

The Instructomatic teacher's console and student units make up the Instructomatic system of language teaching. Various models are available to suit the need, with all components for the instructor housed in a compact desk-type unit. Op-eration and supervision of the class are accomplished by the teacher sitting comfortably at the console with all buttons, switches and lesson sources within easy reach. Instructomatic, Inc., 8300 Fenkell Ave., Detroit 38, Mich.

r more details circle #503 on mailing card.





Literature and Services

- "Blueprint For Better Schools" is the title of a beautifully planned and printed brochure describing and illustrating how schools can be designed to meet a variety of site and functional requirements. Published as part of a newly available, complete school design program by the National Lumber Manufacturers Assn., 1319 Eighteenth St., N.W., Washington 6, D.C., the booklet presents actual design ideas, including site plans, sketches, detail drawings and isometric renderings. Three basic junior high school concept designs are presented, including a compact structure for a level building site, a hillside school for rolling or hilly terrain, and a pavilion unit adaptable for random campus planning. Detailed structural data on the schools are also available.

 For more details circle #504 on mail
- Catalog 2400 describes the complete Penco line of industrial and commercial steel shelving and illustrates the units by photographs or drawings. Available from Penco Div., Alan Wood Steel Co., 200 Brower Ave., Oaks, Pa., the 36-page booklet discusses typical applications and lists specifications for each type of shelving.

For more details circle #505 on mailing card.

- A comprehensive reference source on lighting fixtures for public areas of schools and for residence buildings is available from Heifetz Co., Clinton, Conn. Entitled "Heifetz Design Gallery," the new 64page catalog includes photographs, drawings, charts, tables and specifications. For more details circle #506 on mailing card.
- A new brochure entitled "Four Fine Lines from Frick" illustrates a few models from each of the Streamline, Genraline, Cafeteria and Frick lines. The fourpage folder, available from W. H. Frick, Inc., 704 Citizens Bldg., Cleveland 14, Ohio, includes descriptive information on each item.

For more details circle #507 on mailing card.

• The 13 "Kalcolor" architectural anodic finishes available from Kaiser Aluminum & Chemical Sales, Inc., Dept. NR-42, 300 Lakeside Drive, Oakland 12, Calif. are described and pictured in a 16-page booklet available from the company. A complete description of the anodizing system and details of testing are included with specifications.

For more details circle #508 on mailing card.

 Photometric charts, dimensional data and other descriptive and technical information, including a chart depicting visual comfort of the Trend luminaire for schools and offices, is provided in the Trend Series Bulletin available from Lighting Products, Inc., Highland Park, Ill.

For more details circle #509 on mailing card.

• Young wheeled equipment for commercial, industrial and institutional use is described and illustrated in Catalog No. D-63, available from Paul O. Young Co., Line Lexington, Pa. The 30-page booklet includes information on several new sizes and styles of utility carts, and features a new line of shelf trucks identified by the brand name "Serv-i-Carts."

or more details circle #510 on mailing card.
(Continued on page 230)

Now...a complete NEW line of Halsey Taylor fixtures →



You are looking at the very newest in face-mounted wall fountains... exciting new designs dramatically created in stainless steel by Halsey Taylor. They're just some of the many fountains and coolers in the complete new Halsey Taylor line!

The Halsey W. Taylor Co. Warren, Ohio

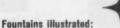


→ in glamorous stainless steel



In addition to these, you can obtain recess and semi-recess wall types, coolers for all purposes, class-room fixtures and wall brackets...all in lustrous stainless steel.

And you also get all the extra Halsey Taylor features, such as dependable performance, healthsafety, maintenance-free service.



Top View . . . 13" back Centre 13" back At right 6" back

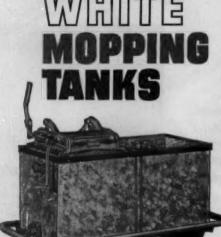
Write for latest catalog, or see Sweet's or the Yellow Pages





THIS MARK OF LEADERSHIP IDENTIFIES THE MOST COMPLETE LINE OF MODERN DRINKING FIXTURES

FOR BIG CLEANING JOBS



For large floor areas select mopping tanks with the capacity to do the job quickly and efficiently. One of White's 6 models is sure to fit your cleaning problem. Of rugged, all steel construction, with solid bronze fittings, White Mopping Tanks will give you years of trouble-free performance.

> Write to White for Full Details

In Floor Cleaning equipment IS THE WORD FOR

WHITE MOP WRINGER COMPANY Fultonville 20



SLIDE TO SAFETY . . .

In 63 actual fires, Potter Slide Fire Escapes evacuated everyone in plenty of time, without confusion or injury.

Adaptable to all types of occupancy and for installation on the interior as well as the exterior.

Return the coupon below for information and a representative if desired.



Tubular Type

Tested and Listed as Standard by Underwriters' Laboratories, Inc.

POTTER FIRE ESCAPE COMPANY, 6110 No. California Ave., Chicago 45, Ill.

- Mail copy of new catalog.
- Have fire escape engineer call with no obligation.

Submit estimate and details on escapes.

Signed

Address

City ...

For additional information, use postcard facing back cover.

- The complete line of mobile, portable platforms, risers and accessories for band and choral concerts, shows and lectures and choral concerts, shows and lectures manufactured by Hamilton Mfg. Co., Two Rivers, Wis., is described in Folder AE-133. Full data and specifications on the Hamilton-Erickson Portable Folding Platforms for every occasion are included. or more details circle #511 on mailing card
- The Fiftieth Anniversary Edition of the catalog, Selected Motion Pictures Free and Rental, is available from Association Films, Inc., 347 Madison Ave., New York 17. An order form is included in the 44page illustrated booklet.

For more details circle #512 on mailing card.

• The new edition of Aluminum Window Specifications is available from Aluminum Window Mfrs. Assn., 630 Third Ave., New York 17. Incorporating many changes since last published in 1958, the 32-page booklet is divided into three sections, general, specific and hurricane requirements.

For more details circle #513 on mailing card.

• The Concrete Masonry Assn., 5205 Hollywood Blvd., Los Angeles 27, Calif., offers a brochure, "Masonry Blocks in Schools," giving construction information of interest to school administrators, boards, and architects and engineers.

For more details circle #514 on mailing card.

• Traylifts and Traybelts by Standard are the topic of a 12-page illustrated booklet identifying and qualifying the products in the line. Available from Standard Conveyor Co., North St. Paul 9, Minn., Bulletin No. 120 offers data and procedure of products and distributed in the product of the standard general specifications on mechanized dish handling systems for hospitals and schools.

re details circle #515 on mailing card

• "A New Concept in Language Laboratory Components" is outlined in a fourpage brochure published by Switchcraft, Inc., 5555 N. Elston Ave., Chicago 30. Descriptive information is presented on Switchcraft components for a convenient, simplified, portable and low-cost language laboratory set-up.

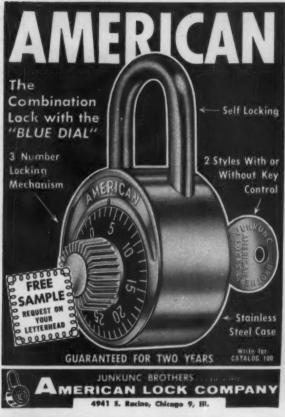
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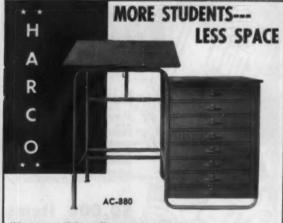
• "Introducing the AutoTutor," the automated teaching method to achieve complete, individualized student instruction, participation and correction," is the legend on the front of a booklet presenting examples of automatic teaching. The booklet is available from Western Design Div., U. S. Industries, Inc., Goleta, Calif.

• The 68-page CTD 1960-1961 Catalog of educational test material, presenting full descriptive information with prices, is available from the Cooperative Test Div., Educational Testing Service, 20 Nassau St., Princeton, N.J. For more details circle #518 on mailing card.

 A comprehensive catalog of 1960-61
 Filmstrips available from McGraw-Hill
 Text-Films, 330 W. 42nd St., New York
 presents descriptive information on filmstrips for primary and middle grades, high school, and college and adult groups. The catalog is carefully indexed.

(Continued on page 232)



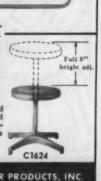


Board and T-Square stored in its individually locked 20½ x 26½ x 2½** drawers, Accommodates more students with greater convenience, Extra boards rest on rails with ample space below for instruments in each drawer, **Quick lock handle adjustment** offers fast self-locking positioning of tops, Also available as a dual model,

- Note 18-0-0

Over 25 styles and sizes of chairs and stools available. Equipment with the famous "Lift-Lok" mechanism, for







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CITY.

• The Vega-Mike wireless microphone system is described in a six-page color brochure offered by Vega Electronics Corp., Cupertino, Calif. Specifications on the complete line of Vega-Mike accessories are presented in addition to the data on Vega-Mike, described as the first "high-reliability" wireless microphone.

For more details circle #520 on mailing card.

• "Power Without Interruption With UPS" is the title of a brochure issued by Consolidated Diesel Electric Corp., 880 Canal St., Stamford, Conn. It describes available Uninterrupted Power Supplies, which provide absolutely continuous power in the event normal power sources fail.

For more details circle #521 on mailing card.

• The complete line of Toteline molded fiber glass serving trays available from Molded Fiber Glass Tray Co., Linesville, Pa., is described and illustrated in 12 colors in Bulletin MFL-19A. Dimensions for all models and results of tests on resistance to breakage, abrasion, moisture, steam and detergents are included.

ore details circle #522 on mailing card.

• Over 45 16mm and 35 mm stripfilms covering a broad range of topics are listed in a colorful, up-to-date Loan Film Directory. Available from Scientific Apparatus Makers Assn., 20 N. Wacker Dr., Chicago 6, the pamphlet includes films intended for use by educational institutions and civic organizations.

For more details circle #523 on mailing card.

• A 25th Anniversary brochure released by St. Charles Mfg. Co., St. Charles, Ill., tells the story of the company, and presents interesting data on the hospital and school furniture divisions and their prod-

For more details circle #524 on mailing card.

• "Facts about Vanilla" are presented on one of a set of quantity dessert recipe cards offered by the Vanilla Information Bureau, Institutional Dept., Empire State Bldg., New York.

more details circle #525 on mailing card.

• Description and specifications on Unit Deck structural timber decking, including standard patterns, assembly detail, installation data and description of grades, are included in a brochure offered by Unit Structures, Inc., Peshtigo, Wis.
For more details circle #526 on mailing card.

· A catalog of Instructional Materials, including filmstrips, records and films for 1960-61, is available from The Jam Handy Organization, 2821 E. Grand Blvd., Detroit 11, Mich. The 26-page illustrated booklet includes an alphabetical listing of all materials mentioned and a handy order

For more details circle #527 on mailing card.

 "Bookbinding Tools, Equipment and Supplies" are the subject of 12-page Catalog 60BB recently released by Craftools, Inc., 396 Broadway, New York 13. Bookbinding presses, outfits, special tools, cutters, stamps and papers are described.

For more details circle #528 on mailing card.

• "Practical Welding Projects For School and Shop" is the title of a new 27-page booklet published by Linde Co., Div., Union Carbide Corp., 270 Park Ave., New York 17. Eighteen different welding projfor use in secondary and vocational schools and in college. Each project is illustrated and has step-by-step assembly

For more details circle #529 on mailing card.

• Three new subject area catalogs of educational films supplement the 1960 catalog of the Audio-Visual Center, Indiana University, Bloomington, Ind. The new catalogs cover films for Teacher Education, Elementary Grades and Language Arts and Literature.

circle #530 on mailing card.

 A teaching film, "Perception of Driving Hazards-Part III-Highways and By-ways," designed for classroom and other instructional use to help train drivers to spot traffic hazards and avoid accidents, is available from Shell Oil Co., 50 W. 50th St., New York 20.

For more details circle #531 on mailing card

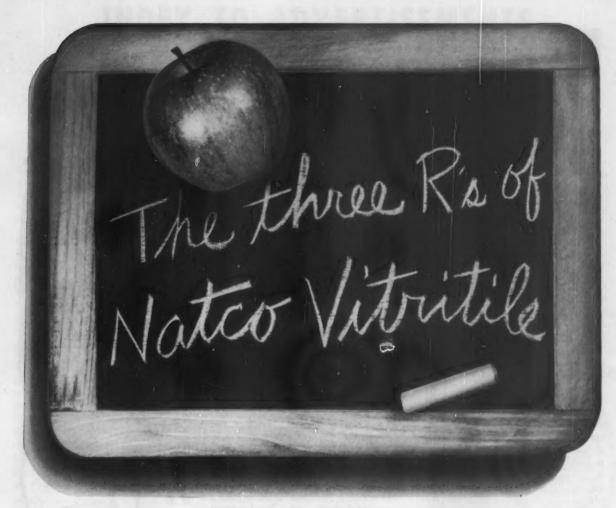
• Factual information on Clark Radiant Electric Broilers is presented in two leaflets from Clark Industries, Inc., 1509 Meridian St., Nashville 7, Tenn. How the broilers save time and permit serving quality hot sandwiches is dicussed, together with facts on operation of the units

For more details circle #532 on mailing card.

(Continued on page 234)







Radiant

Natco Vitritile is available in a variety of attractive, radiant colors. All colors are permanent and will not fade. A periodic cleansing with common soap and water is all that's necessary to **maintain** Vitritile's original radiance.

Resistant

Vitritile—a ceramic glazed structural clay facing tile—is resistant to moisture, fire, chemicals, dirt and scuffs. Interior walls of smooth Natco Vitritile resist the day by day wear and tear that only school children can administer.

Reliable

Install it and forget it! Vitritile's permanent, hard-fired finish assures years and years of maintenance-free service. Because it is a genuine clay tile product Vitritile will last the life of any school in which it is installed.

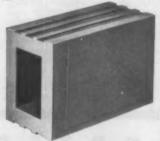
If you're building a new school or adding to an existing school it will be to your best interests to consider Natco Vitritile.

For complete information write for catalog #S-61 N.



Hallway in the North Hills High School, located near Pittsburgh, Pennsylvania, shows a typical installation of the Natco Vitritile "4D" series $(51/6^{\circ} \times 7\%^{\circ}$ face size).

Vitritile is available in many shapes and sizes. Including the large 8W series (7%" x 15%" face size) and the popular 6T series (5½6" x 11%" face size) available in nominal 2", 4", 6" and 8" thicknesses.



Natco Corporation

General Offices: 327 Fifth Avenue, Pittsburgh 22, Pa. Other Branch Sales Offices: Boston, Chicago, Detroit, Houston, New York, Philadelphia, Pittsburgh, Syracuse, Birmingham, Aia., Brazil, Ind. In Canada: Natco Clay Products Ltd., 57 Bloor St., W., Toronto.





No. 59

Now choose from white or aluminum finish steel backboards. Face of backboard is a safer 4 feet from tandem upright. Galvanized uprights of heavy 3-inch plus 2-inch pipe are arc-welded for top rigidity. "Flared" galvanized extension arms reduce sidesway . . . increase rigidity.

EXTENDED

BACKSTOP

Porter also manufactures Jungle-gyms, See-saws, Slides, Swings . . . a complete line of the highest quality playground equipment, all designed to provide maximum durability.

Write today for complete New Catalog.

ATHLETIC EQUIPMENT COMPANY

9555 IRVING PARK ROAD SCHILLER PARK 1, ILLINOIS • Catalog #702, describing in detail the features of the versatile Bogen VP-20 and VP-40 portable transcription players, with comprehensive engineering specification sheets on these models, is available from Bogen-Presto, Div. The Siegler Corp., P.O. Box 500, Paramus, N.J. For more details circle #533 on mailing card.

• A 16-page catalog on the Geyser Grid System for windows and curtain walls, available from the E. K. Geyser Co., 915 McArdle Roadway, Pittsburgh 3, Pa., fea-tures details and illustrations of the new neoprene gasket system for glazing and sealing, plus recommended design procedure, specifications and full description of the Geyser ventilator.

For more details circle #534 on mailing card.

• A 108-page catalog supplement SP-64 reaturing many new items in the expanding Kimble glass line is presented by the Kimble Glass Co., a subsidiary of Owens-Illinois, Toledo, Ohio. Included in the supplement is information on Kimax flasks, small sized pipettes, Teflon stopcocks and other Kimax ware. cocks and other Kimax ware.
For more details circle #535 on mailing card.

· A four-page folder, "Tested for Safety," lists and pictures the complete line of Werner Alumiladders. Available from R. D. Werner Co., Inc., P.O. Box 580, Greenville, Pa., it includes specifications and descriptions of the aluminum ladders and accessories.

For more details circle #536 on mailing card.

• A four-page bulletin, "Tracings You Can Wash," describes a new process of restoring the printability of original tracings by washing them with soap and water. Included with the illustrated leaflet, available from Keuffel & Esser Co., Third & Adams Sts., Hoboken, N.J., is a sample of washable Herculene drafting film, a waterproof plastic, and a Duralar pencil that forms a bond of extraordinary strength with the film.

details circle #537 on mailing card.

· Conceived as a supplement to textbooks on microscopes and how to use them, "Microscope Experiments for Ele-mentary and High School" is a 60-page booklet describing simple as well as clasby Testa Mfg. Co., 10126 E. Rush St., El Monte, Calif., at \$1 per copy. For more details circle #538 on mailing card.

· Steelco Shades are the subject of the new catalog published by the Oliver C. Steele Mfg. Co., Spiceland, Ind. The various sizes and types of shades and shade accessories in the line are described and illustrated, and architectural information and specifications are included.

For more details circle #539 on mailing card.

• Detailed illustrations and specifications covering all elements of Lumi-Flo troffers, which provide light, cool air and warm air from the same concealed ceiling fixtures, is available in a 44-page catalog, Bulletin B, offered by the Benjamin Div., Thomas Industries Inc., 207 E. Broadway, Louisville 2, Ky. A special section describes the Benjamin research and engineering laboratories in Des Plaines, Ill.



The Clarin Folding Tablet Arm Chair turns any room space into a class, music, audiovisual or study room. It's a desk or a rigid, quiet, comfortable chair as desired. When clear floor space is wanted, it folds flat in one motion, stores in little space.

For more information on Clarin chairs, Write Dept. 14TA

Clarin Manufacturing Company 4640 W. Harrison St., Chicago 44, Illinois

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USE THIS PAGE TO REQUEST PRODUCT INFORMATION

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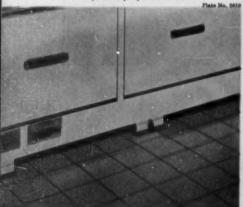
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CERAMAPLEX®... newest development of Romany® Spartan research. Sixty-four ceramic mosaic tiles securely bonded in a resilient rubber grid, pre-grouted and laid quickly and inexpensively in 9" squares. Quiet and comfortable underfoot. Choose from 12 attractive Buckshot® patterns for installation over any sound sub-floor above, on or below grade.





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...floors and walls of Romany Spartan

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